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TASK ANALYSIS EMPLOYING NOBELS ACTION VERBS TO FLOWCHART GENERAL INSURANCE OPERATIONS

by

© WILLIAM CURTIS HART

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled

Task Analysis Employing NOBELS Action Verbs to Flowchart General Insurance Operations

submitted by William Curtis Hart

in partial fulfilment of the requirements for the degree of

Master of Education in Vocational Education.

Supervisor

Date October 14, 1977

ABSTRACT

Twenty-four persons, as employees, rated each of four combinations of process chart and list of verbs as to suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by employees in local general insurance agencies. Nine persons, as employers, rated these same combinations on the same basis. These employers were selected from businesses identified as handling general insurance in the telephone directory in use at the time the study was undertaken.

The first purpose of the study was to determine the combination of process chart and list of verbs preferred by employees and by their employers. The second purpose of the study was to provide, to each employer who participated in the study, the combination of process chart and list of verbs found to be preferred generally, for each task reported by that person's employees.

Information was gathered by correspondence and by interview. It was not required that all the tasks performed by an employee be reported, if these were reported at all. In the absence of any report of tasks performed by an employee, that employee was required to rate, on the basis of suitability as defined for the purposes of the study, each of four combinations of process chart and list of verbs for six tasks selected from a great variety of tasks

reported by other authors.

The general conclusion was that one combination of process chart and list of verbs is preferred by both the employees and by their employers. Specific conclusions were that the combination preferred by the respondents was chosen because of its overall suitability for employment, that information with respect to writing task performance statements is appropriate for use, and that certain "fundamentals" do apply in local general insurance agencies.

With respect to further study, it was recommended that consideration again be given to the work of Huffman et al. (1968) in "A Taxonomy of Office Activities for Business and Office Education". It was also recommended that this study, that is, the study which is the subject of this thesis, be replicated and expanded as might be found to be necessary.

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CHAPTER I

INTRODUCTION

Certain conclusions were reached by this author in "A Study of the Feasibility of Adapting the Familiar Process Chart to New Office and Business Education Learnings System (NOBELS)" (Hart, 1976, pp. 54-55). These conclusions are as follow:

(a) it is indeed feasible to chart the steps involved in the tasks which were considered; the fact is that the steps, in each and every task selected for charting, actually were charted employing all the process charts which had been developed.

(b) as it is feasible to chart the steps in the tasks considered not only under "SIC* Performance Goals" on pages 58-104, but also under "Performance Goals by Functions" on pages 105-288, in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970), so should it be feasible to chart steps in any and all tasks which might come to be considered.

(c) while certain procedural difficulties were encountered in charting the tasks involved, and which difficulties no doubt would be encountered in charting tasks to be considered in any future study, these difficulties do admit of being overcome, certainly once strict adherence to a

*Standard Industrial Classification.

uniform set of instructions were to be required of persons employing some adaptation or adaptations of the familiar process chart to report on office work.

(d) not only is it feasible, but it would appear also to be highly desirable, to be provided with a standardized means of recording and reporting what is being done in the office, certainly in view of benefits accruing from there existing knowledge of what is required and from being able to employ the very same means by which that information was gathered to develop instructional content and process for training these young persons.

Recommendations, by that same author (Hart, 1976, pp. 55-56), were made for future study of the desirability of employing some variation or variations of the familiar process chart to report what is being done in office work and are as follow:

(a) the recommendation that two process charts, each to make use of two lists of verbs, be employed to record and report the steps in tasks involved, for instance, in local general insurance agencies. . . . It is contended that, from the information to be obtained by this means, it should be possible to select the combination best suited to devising instruction better suited, than that which exists, to preparing young persons to enter this type of work, something which would be of immediate benefit should it be decided to develop a program of studies of this nature at the post-secondary level of education.

(b) the recommendation that a uniform set of instructions be developed and that strict adherence to these be required of persons employing any and all adaptations of the familiar process chart, even to the extent of involving these persons in intensive training in order that this condition might be achieved.

(c) the recommendation that, in order to obtain enthusiastic co-operation, by employers and employees alike, consideration be given to the approach taken by Halsey (1953, pp. 203-207) in "Supervising People". That author, in his chapter on "Improving Work Methods", outlined "A Six-Step Plan for Studying and Improving Work Methods" and it very well might be that this approach, or some similar approach, should be employed to gain the full co-operation required to make any future study of this nature an unqualified success. Then, too, it very well might be concluded that the approach should stress benefits accruing to (i) the employer from knowing the tasks involved in the operations which go to make up his whole business and from being able to employ this information in training new employees, and (ii) the employees involved from knowing precisely what will be required in any position and what will have to be learned in order that the duties in that or any position might be performed satisfactorily.

It was to the end of determining which combination of process chart and list of verbs is preferred for employment in recording and reporting the tasks and the steps involved

in each of these tasks that this study was directed. Also, it was directed to the end of providing the employers who participated in the study with process charts of the tasks performed by their employees in the everyday conduct of business.

Statement of the Problem

It was contended, by the authors in "A Taxonomy of Office Activities for Business and Office Education" (Huffman, Brady, Peterson, & Lacy, 1968, p. 3), that "new instruction is needed to prepare young people to meet current and emerging requirements of the office". This contention was based on what these authors considered to be the fact that, "while technological and scientific innovations have caused changes in the office", "the basic instructional program intended to prepare persons for office occupations has remained virtually unchanged".

Lanham, Herschelmann, Weber, and Cook, in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (1970, p. 3), held that "the market for job preparation is an increasing market influenced by higher than average replacement and estimated increase in numbers and proportion of the total labor force".

In "Development of Task Performance Statements for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Lanham, Herschelmann, & Cook, 1972, p. iii) it was advanced that "public pressures for

accountability in education, movements toward career education, a strengthening of Federal and state staffing and supporting of career education thrusts . . . continue the necessity for revitalizing office occupation preparation with current and job-related task performances, the major output of this revision of NOBELS".

The position, taken by the author in this study, was that instruction in business and office education does need to be improved, that NOBELS does present definite possibilities for improving that education, and that this study does constitute a worthwhile beginning on the application of NOBELS in a very practical situation.

The Problem, then, for the purposes of this study, was one of determining the means preferred by employees and by their employers for recording and reporting the tasks and the steps involved in each of these tasks which are performed by these employees who are engaged in local general insurance agencies.

Review of the Literature

There was undertaken, in the course of the study, an extensive review of literature pertaining to the approaches which have been made to the whole problem of improving instruction in business and office education. No attempt has been made to include references other than those which bear directly on the subject. Selections, from the literature reviewed, have been restricted to those which follow.

NOBELS

1. It was in "A Taxonomy of Office Activities for Business and Office Education" (Huffman et al., 1968) that it was reported that provision had been made "for an orderly and systematic way of looking at office activities in the operating, interacting, and managing dimensions" (p. iii); however, it was then conceded that the Taxonomy "is a preliminary effort to develop a comprehensive and consistent means of analyzing office activities" (p. 4) and that "it should be considered . . . an initial effort to develop a classification scheme for office activities using action verbs" (p. 5).

The authors of the Taxonomy went on to state that it "was developed within a framework of action verbs" in the belief "that the verb in a sentence that describes behavior is the crucial element in preparing a behavioral objective" and that, "since the Taxonomy is to be used for the writing of performance goals", "the verbs will provide for the action statements needed in the goals" (p. 11).

It was noted that new instruction "is needed to prepare young people to meet current and emerging requirements of the office" (p. 3) and that information gathered through this method of analysis "can be used as a basis for the development of realistic performance goals" (p. iii). What were held to be the Objectives of the Taxonomy were set out on page 4 and are as follow:

1. To provide systematic guidance for the observation and

analysis of office activities. . . .

2. To provide a common language for describing office activities. . . .

3. To provide a basis for consolidating data from many locations and occupations. . . .

4. To provide for writing performance goals. . . .

The position, taken by the authors of the Taxonomy, was that, with a properly selected list of verbs, "an all-inclusive list of office tasks and activities can be developed by adding nouns, adjectives, and phrases to the verbs" and that any one verb "may be used to describe many tasks by simply changing the descriptors attached", thus enabling "a simple framework of verbs" to "serve as a medium for describing all office tasks and activities" (p. 11).

Another reason given for the use of verbs, "as the basis of the Taxonomy", "is their relative constancy in meaning". It was held that, since verbs represent "fundamental processes that will remain unchanged although procedures in their performance may change", "a vocabulary of verbs provides both an action and a constant base for describing office tasks and activities" (p. 11).

There followed the "collection of verbs" and the first group of verbs "was obtained from the list of office activities that had been recorded during the review of secondary sources and office visits", with a total for the final group of verbs of "approximately 2,000 by the time the review of secondary sources was completed". The verbs were

then studied in an effort "to uncover sets, patterns, and classes into which the verbs might be grouped" (p. 12). After intensive study and analysis, what were termed "Primary Division Verbs" were grouped to form the "Operating", "Interacting", and "Managing" Domains. "After the three domains and the primary divisions of each of the domains had been determined, secondary divisions were established for each of the primary divisions to indicate distinctive ways in which the action of the primary verb might be carried out. . . . Each secondary division is concluded by the use of a category classified as 'other.' This category creates an open-ended taxonomy to which verbs may be added if necessary" (p. 14).

Primary Division Verbs, together with the definition of each of these Verbs, which Verbs go to make up the three Domains, were set out on pages 25-26 and are as follow:

Operating Domain

Arranging:	putting into an order or system
Calculating:	computing new data from present data by some mathematical process or combination of processes
Collecting:	securing data, supplies, or equipment
Comparing:	examining in order to determine similarities and differences
Composing:	creating and developing written information
Indexing:	determining and indicating categories to which materials may be assigned
Manipulating:	performing simple manual or mechanical operations
Modifying:	making changes
Purging:	destroying or eliminating
Recording:	placing data or information on paper, film, tape, or other media
Storing:	putting aside for future use

Transmitting:	giving out or sending out
Verifying:	determining the accuracy or inaccuracy of data

Interacting Domain

Communicating:	oral means of requesting, giving, receiving, or discussing information
Assisting:	morale building, guiding, and training-type activities performed by office workers
Coping:	using strategies to deal with threat: positive action to overcome; negative action to overcome; action to escape; no action

Managing Domain

Planning:	mental determining of a course of action
Organizing:	establishing the work environment
Actuating:	stimulating and maintaining of performance and effecting corrective measures
Controlling:	evaluating work performed and the determination and recommendation of corrective measures based on feedback

While it was conceded that the Taxonomy represents only a start on the whole problem of reconciling what should be taught and how it should be taught, with what is required in the world of office work, it was the hope of the authors of the Taxonomy that, ultimately, "conditions under which each task is to be performed and the criteria of successful achievement will be added to each task description to develop prototype performance goals" (p. v). Following this lead, it very well might become a matter of employing the Primary Division Verbs, in each of the Domains, as concepts or clusters of skills to be taught. Once performance goals were to have been developed for these Primary Division

Verbs, it very well might become a matter of employing task analysis to assist in determining the optimum conditions for learning the various tasks the student must learn to perform.

2. It was in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970) that it was acknowledged that "NOBELS Action Verba and Synonyms", on which the "Performance Goals" reported by the authors were based, were "a direct outgrowth of the Taxonomy" (p. 8); however, the authors did go on to state that an attempt had been made "to classify steps of task performance by the taxonomy" but that they had "found the scheme not usable" (p. 47) for reasons which were set out on page 48 and which are as follow:

> a. Office activities of 16 to 24 year old workers, NOBELS' target group interviewed, could not be classified in the three taxonomy domains of operating, interacting, and managing. Rather, with the exception of those actions related to social roles, the task verbs cluster around the input, processing, output classifications of the single domain of operating.
>
> b. Some verbs were too narrowly defined to describe the range of technical meaning of the words as actually used in offices. For example, the verb "average" was defined "to find the arithmetic mean," an accurate definition of one type of average but a definition which excludes all other meanings for describing centrality of business phenomena. Interestingly enough, the office tasks we studied did not require the use of the verb "average" to describe office actions.
>
> c. Numerous taxonomy verbs, especially in the "interacting domain," were abstractions that were not defined in observable behavior. Thus, "empathize" as a verb is at least once removed in

generality from actions that one would accept as evidence of "empathic behavior" in an office worker. While some behaviors collected about office workers in their social roles might be described as "empathic," to do so would have required a value judgment placed on the behavior actually observed.

d. The view of the taxonomy authors that a checklist of verbs could be used in observing task performance in an office did not match the realities of time and resources available for data collection.

e. Strict adherence to taxonomy verbs frequently resulted in awkwardness of expression of office tasks. For example, "types," a common verb used in office communication, had to be expressed as "copies with a typewriter," a somewhat stilted expression. The stilted expression resulted from the attempt to codify under one heading all copying: whether by pencil, duplicator, or typewriter.

The authors concluded by stating that "the first taxonomy as described, however, was used as an important tool by all data collectors of NOBELS to provide specific verbs that described office actions observed" (pp. 48-49).

It was to meeting the objectives of "developing a sampling design for collecting data from office work stations", of "developing a procedure and a training program for data collection", of "converting field data to performance goals: primary (terminal), interim, and prevocational", of "analyzing the data collected", and of "reporting a master list of performance goals", that the study was addressed. That "trends and concepts from emerging office occupations and practices" still have to be isolated and converted to "performance goals" was also acknowledged by the authors (p. 8).

On the basis of 244 interview cases from NOBELS pilot data collection, "a tentative listing of 108 verbs describing office actions as reported by employees and interviewers was extracted". It was concluded that, for purposes of analysis, "grouping by synonym rather than developing a taxonomic hierarchy of generic terms" was desirable. Accordingly, "an alphabetic listing of 108 verbs used to code steps of basic tasks" and corresponding synonyms, "together with the current recommended listing of 57 verbs and their synonyms recommended as a result of our experience", were developed (p. 49).

Sixteen major verbs were subsequently developed and served to classify all action verbs under the divisions of (1) acquisition, i.e., "the source or sources of or materials on which the task is to be performed", (2) process, i.e., "the sequence of actions taken by the worker to perform the work", and (3) disposition, i.e., "what the worker does with the product or output generated". These sixteen "major verbs" and corresponding "action verbs of steps subsumed under these sixteen major verbs", and, in parenthesis, "synonyms of a NOBELS verb or a specialized verb used" (p. 55), were set out on page 56 and are as follow:

Call	Wire (page, phone, telephone)
Check	Adjust, Correct, Inquire, Oversee, Proofread, Scan, Test, Verify (confirm, examine, inspect, update)
Compile	Arrange, Attach, Batch, Bind, Collate, Collect, Cut, List, Obtain, Select (choose, gather, get, make)
Compose	Convert, Draw, Sign, Write (make up)

Compute	Add, Count, Divide, Extend, Multiply, Quote, Reconcile, Run Tape, Subtract, Total (balance, calculate, figure)
Deliver	Deposit, Destroy, Disburse, Distribute, Issue, Place, Refer, Request, Route, Send, Transfer (give to, hand to, present, put, submit, transmit)
Determine	Assign, Devise, Evaluate (decide, design, formulate)
Duplicate	Photograph (copy, mimeograph, photocopy, Xerox)
File	Destroy, Hold, Locate, Maintain, Pull, Refer, Remove, Search, Sort (extract, find, go through, look up, take from, trace)
Inform	Answer, Assist, Direct, Discuss, Explain, Greet, Inquire, Instruct, Interview, Note, Post (on bulletin board), Repeat, Request (advise, confer, consult, describe, give direction, notify, remind, teach, tell, welcome)
Mail	Address, Insert, Label, Open, Route, Seal, Send, Stamp, Wrap (forward, stuff, transmit)
Operate	(EDP) Code, Feed, Perform, Punch, Run Through, Sort, Wire (activate, program)
Receive	Answer (phone), Greet, Hold, Obtain, Request, Take Dictation
Record	Add, Assign, Code, Complete, Label, List, Note, Post (to ledger), Sign, Stamp, Write (enter, fill in, journalize, log, mark)
Sort	Compare (index, match, separate)
Type	Teletype, Transcribe

It was these same verbs which were employed in this study in Figure 2, "The First Process Chart Employed".

The authors (Lanham, Herschelmann, Weber, & Cook, 1970) made no claim "that the report represents a final set of performance goals" (p. 24). It was acknowledged that much remains to be done with NOBELS; however, the authors did express the belief that it should be possible to derive immediately substantial benefit from making use of the "tentative list of universals, i.e., behaviors that are

fundamental to the successful performance of most office tasks" which they had formulated (p. 38). A consideration of these "fundamentals" is undertaken in Chapter II entitled "Results".

3. It was in "Development of Task Performance Statements for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Lanham, Herschelmann, & Cook, 1972) that it was conceded that "a claim to the development of 'performance goals' as in the original report was in error" and that what had been termed "performance goals" "has been changed in the revised materials to the more modest designation of generalized task statements or performance specifications from which performance goals will need to be developed". The authors went on to state that, "to be sure, the competencies and performances attached to an office preparation program should be extracted from the actual performance of office work" and that "a generalized task statement even in its detailed form is at most a generalization of important steps taken to perform office tasks and not the specific performance expected of a particular office worker" (p. 309).

Products, generated in the course of that study and incorporated in the covering report, were set out on page 53 and are as follow:

1. Reclassification and reordering of task statements according to the number of individual task sheets represented in the interview data.

2. A compilation of all task statements separate from the detailed presentation of steps for their

performance, flowcharts, and supplementary information.

3. A list of task statements encompassing the highest number of individual task sheets.

4. List of task statements drawn from the medical and banking fields.

5. A concordance of verbs and objects of task statements compiled and cross-referenced.

6. Coding and notation system for all task statements and their listings for cross-referencing.

Fifty-seven verbs had been identified in the original report (Lanham, Herschelmann, Weber, & Cook, 1970, pp. 329-339) and these same verbs were identified in this report (Lanham, Lanham, Herschelmann, & Cook, 1972, pp. 348-358). These verbs bear directly on the verbs employed in this study. These verbs, synonyms of these verbs, and definitions of these verbs are as follow:

add	to increase in number, size, or importance
adjust change, set	to bring to a more satisfactory state
answer	to speak, write, or reply
arrange block in, block out, collate, design, devise, flowchart, negotiate, plan, schedule, straighten	to put into correct or desired order
attach affix, clip, staple	to make fast or join
call page, telephone	to communicate or utter
check examine, inspect	to inspect for satisfactory condition
code	any system of symbols for meaningful communication
collect accumulate, assemble, batch, gather	to bring together into a band or group
compare balance,	to examine for the purpose of discovering resemblances or

match, differences
reconcile
compile to assemble and put in logical
list, order
make up, set up
complete to fill, make entire, perfect
fill in, fill out
compute to determine by mathematical means
calculate, or arrive at an answer
convert, count, divide, extend, figure, multiply, subtract
correct to change in order to set right
change, debug, fix, update, upgrade
deliver to give, transfer, yield
give, possession of
hand to, present, submit
destroy to put out of existence
discard, purge, throw away
determine to settle a question or come to a
choose, decision
decide, evaluate, grade, identify, score, select, test
direct to assist by giving advice,
assist, instruction, and supervision
describe, explain, help, instruct, oversee, provide, show, supervise, supply, take, teach, witness
discuss to discourse about, examine and
confer, pass on
consult, interview, talk with
distribute to deal out, to dispense
give to, hand
duplicate to make a copy of
copy, mimeograph, photocopy, Xerox
file to arrange in particular order for preservation and reference
greet to meet and give salutations
welcome
hold an order or indication that some
keep, action is to be delayed
maintain, store
inform to make known or give instruction
advise, alert, notify, quote, reiterate, relate, remind, repeat, signal, suggest, tell
insert to put into or inject
put in, stuff
issue to give out or make available
assign, disburse, pay
locate to determine the place of, to seek
find, out and find
go thru, look for, search, trace
mail to send postal matter by mail
note to take due or special notice of
annotate, make note of, notate

obtain get, pick up, secure	to gain or attain possession of
open	to make available for use
operate activate, deactivate, feed, load, move, put in, start, thread, turn off, turn on	to cause to function; to bring about; effect
package bind, tie, wrap	to enclose in a package or protective covering
place put	to cause to rest or lie, to dispose, to put into
proofread	to read and mark corrections in matter
pull extract, take from	to remove or cause to be removed from a place (file)
punch keypunch	to record data by perforating a card or tape
receive take	to take in, to admit, to accept
record enter, journalize, log, post	to set down in writing
refer consult, look at, look on, look up, relay, turn over	to send or direct for information
remove delete, erase, take off	to change or shift location, take off or away
request ask, inquire	the act of asking for something
return give back	to go back or send back
run tape	to operate a tape machine, e.g., adding machine
run through	a term used for putting data into a computer and operating
scan read, review	to make an intensive examination of, to check
send forward, route, transmit	to cause something to be conveyed or transmitted by an agent to a destination
sort break down, index, separate	to arrange according to characteristics
stamp	to impress or mark with a device
take dictation	to write dictated material, usually in shorthand
total	a result of addition, a summation of factors
transcribe	to copy dictated materials in common, legible language

transfer	to pass from one to another
connect	
typewrite	the act of using a typewriter (type)
verify	to confirm, to prove to be true
confirm	
write	to form or trace symbols on paper

compose, draw, handwrite, initial, label, make up, mark, sign, sketch, tag

Finally, it was stated that one early decision which had been made was "that clarity was improved by visualizing similar task steps through flowcharting". The authors went on to state that, accordingly, "in the presentation to follow, a flowchart of a performance goal is included when the process of steps involves more than a straightline or sequential flow without alternative steps or decision points" (p. 54).

Task Analysis and Process Charts

With respect to "Task Analysis", Pipe, in "Objectives--Tool for Change" (1975), stated that "task analysis is a way of getting specific about what goes on in any useful work", that "task analysis begins with breaking down somebody's job into 'tasks'--all the distinct, logical, necessary facets of the job", and that "a task occupies a significant part of a worker's time and is performed for some purpose, by some method(s), according to some standard of speed, accuracy, or quality". The author went on to state that "each task is normally analyzed into its separate elements, one or more of them" and that "an element is the smallest step into which it is practicable to subdivide any work activity without getting involved in analyzing separate

movements and mental processes" (pp. 36-37).

It was in "Objectives for Instruction and Evaluation" (Kibler, Cegela, Barker, & Miles, 1974) that the authors stated that "the teacher may also find Gagne's (1970) behavioral analysis (also called task analysis) technique useful in preparing objectives for instructional units that primarily focus on complex cognitive or psychomotor skills". The authors agreed with Gagne "that mastery of subordinate skills is necessary before mastery of superordinate skills can be achieved" and noted that "Gagne does provide a unique and useful method for determining what are the necessary prerequisite skills for a given terminal objective". The authors went on to state that "the method, called behavioral analysis, is accomplished by beginning with the terminal objective for a unit of instruction . . . and working 'downward' to the necessary behaviors for the unit of instruction", this being accomplished by determining what a student must already know how to do in order to learn a particular skill (p. 118).

Then, too, De Cecco, in "The Psychology of Learning and Instruction: Educational Psychology" (1968), stated that "the chief purpose of task analysis is to help the teacher determine the optimum learning conditions for the various tasks the student must learn to perform", its having been acknowledged that "the teacher must not only describe but also analyze the tasks he expects the student to perform" (p. 45).

Task analysis, then, as employed in this study, constituted the means by which the tasks, reported by employees engaged in local general insurance agencies, were broken down so these tasks and the steps involved in each of these tasks might be recorded and reported. It remains for task analysis to be applied to the instruction of these and other employees, but this is quite beyond the purposes sought to be achieved through this study.

With respect to "Process Charts", Archer (1967), in "An Introduction to Canadian Business", defined a process chart as "a written summary of the various production operations, storages, and inspections which take place in a manufacturing cycle". Archer went on to state that this summary "enables a person to see more readily any weaknesses in the present system, such as unnecessary movement of materials and unnecessary storage" (p. 348).

Terry (1970), in "Office Management and Control", included the process chart as one of the "common charts of office work simplification" and claimed that, generally, it serves "to provide the facts for a work simplification project in a clear and comprehensive manner". Terry went on to state that, "specifically, work simplification charts serve the following purposes: (1) assist in securing, organizing, and visualizing the facts, (2) aid in analyzing and evaluating these facts, (3) help formulate an improved procedure, and (4) assist in convincing others of the value of the improved procedure" (p. 79).

In "Systems Analysis for Effective Administration", Barish (1951) claimed the process chart to be "a very convenient and useful device" in that it records "the detailed systems data in readily understandable manner so that they may be analyzed to eliminate unnecessary steps or to change the order in which they are done to reduce effort, fatigue, and time". Barish equated both "process" and "procedure" to "a relatively simple activity or a small portion of an activity which is performed within one organizational unit" and went on to define the process chart as "essentially a detailed, chronological record of the successive steps in a procedure" (p. 87).

The process chart, then, was selected for employment in this study for its versatility and ease of use in recording and reporting the tasks performed by employees engaged in local general insurance agencies. That the authors of "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970, p. 54), and that the same authors in "Development of Task Performance Statements for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Lanham, Herschelmann, & Cook, 1972, p. 88), recognized the utility of flowcharting, is borne out by their statements that "one early decision was made that clarity was improved by visualizing similar task steps through flowcharting" and that a flowchart of a performance goal (1970) or task (1972) "is included when the process of

steps involves more than a straightline or sequential flow without alternative steps or decision points".

Nature of the General Insurance Agency

Schuman, in "Portfolio of Accounting Systems for Small and Medium-Sized Businesses" (M. D. James, Ed., 1968, p. 688), stated the nature of the general insurance agency to be as follows:

> The insurance agency lives and breathes as a service business, and therefore it is primarily a sales organization. The public looks to the insurance agent as an individual who is offering personal, professional assistance in the ways and workings of insurance, and therefore he looks to the agent to relieve him of the burden of securing the proper coverage. Policyholders will buy insurance because they have confidence in the salesman. Such confidence comes about because they feel their agent is knowledgeable and ready to perform services for their benefit. It can, therefore, be said that the strength and purpose of the service he performs are similar to the efforts of a consultant building tomorrow's roads.
>
> The areas that will be considered fall into various categories and into degrees of importance. The insurance agent might be called upon to establish a portion for the protection of loss due to fire, casualty, theft, and various other hazards of everyday life. He may also help in the molding of the client's estate planning including the proper setup for tax advantages.
>
> This type of relationship creates a much closer business contact than would be expected with the normal sales-customer association.

The importance, attached by Schuman to the sales and service aspects of the general insurance business, particularly as these bear on the employees in local general insurance agencies, was identified in the course of this study. More information on these aspects of the general insurance business is provided in Chapter IV

entitled "Discussion".

Purposes of the Study

The Purposes of the Study were two in number and are as follow:

1. the determination of which combination of process chart and list of verbs is preferred, by the employees and employers canvassed, for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by employees in the conduct of everyday business in local general insurance agencies.
2. the provision, to each employer who participated in the study, of the combination of process chart and list of verbs found to be preferred generally by the employees canvassed, for each task reported by that person's employees.

With respect to the first Purpose stated for the study, namely "the determination of which combination of process chart and list of verbs is preferred, by the employees and employers canvassed, for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by employees in the conduct of everyday business in local general insurance agencies", it is contended that this Purpose bears directly on the Problem stated for this study. This was borne out by the employees and employers canvassed in the course of the study.

Related to the first Purpose stated for the study was the First Question to be Answered which is: Is there any one combination of process chart and list of verbs preferred

by the employees canvassed on the basis of suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which they perform? Related to it was the Second Question to be Answered which is: If there is one combination of process chart and list of verbs preferred by the employees canvassed, is this same combination preferred by their employers who were also canvassed in the course of the study?

With respect to the second Purpose stated for the study, namely "the provision, to each employer who participated in the study, of the combination of process chart and list of verbs found to be preferred generally by the employees canvassed, for each task reported by that person's employees", it is contended that this Purpose should benefit these employers by pointing up problem areas in their day-to-day operations so these might be corrected and by providing the means by which new employees might be readily trained. This was also borne out by the employees and employers canvassed in the course of the study.

Assumptions and Delimitations

It has been assumed that conclusions based on the data generated in the course of the study were not adversely affected by not requiring that all tasks performed by an employee be reported, if these were reported at all, and by accepting, in the absence of any report of tasks performed by that employee, that employee's assessment of the four combinations of process chart and list of verbs for the six

tasks set out in Appendix 5.

Also, it has been assumed that literature originating in the United States does apply, to a significant, if somewhat limited, extent, to the Canadian scene. Certainly, there exists a number of instances in which application is not appropriate; however, it has been assumed that, for the most part, the views of authors from the United States are relevant for the purposes of this study.

With respect to Delimitations, the Population, on which the study has been based, is restricted to that set out under "Population and Sample" in Chapter II. No attempt has been made to generalize conclusions from this study to any population other than that Population.

Also, the study has been restricted to "local general insurance agencies". That conclusions based on it very well might be extended to other businesses would have to remain to be determined.

Definition of Terms

NOBELS--the acronym for "New Office and Business Education Learnings System" as employed by Huffman et al. (1968), by Lanham, Herschelmann, Weber, and Cook (1970), and by Lanham, Lanham, Herschelmann, and Cook (1972).

Local general insurance agencies--businesses identified as handling general insurance in the "Extended Flat Rate Calling to Alberta Government Telephones Areas" section of the "Edmonton & Vicinity Phone Book" which became effective on March 7, 1976 but which was replaced by the one which

became effective on March 6, 1977.

Task--a process, a procedure, "a relatively simple activity or a small portion of an activity which is performed within one organizational unit" (Barish, 1951, p. 87) and which has both a beginning and an end as set out in Figures 2 and 3 employed in this study.

Process chart--as defined by Barish (1951), "a detailed, chronological record of the successive steps in a procedure" (p. 87) and as illustrated by Barish on page 92.

Suitability--suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work in local general insurance agencies.

CHAPTER II

METHOD

Research Design and Statistical Test

Van Dalen, in "Understanding Educational Research" (1966, p. 206), included "survey studies" as one category of "descriptive research" and, on pages 207-211, went on to describe "job analysis" under that category. It is with "job analysis" or, as set out in the title of this thesis, with "task analysis", that this study was concerned. Alternatively stated, the research design employed in this study may be described as being "job analysis", which falls under the category of "survey studies", which category falls under "descriptive research", all as set out by that author.

Van Dalen claimed that "an analytical knowledge of job components helps administration", among other things, to "detect weaknesses, duplications, or inefficiency in the present work procedures" and "to set up training programs and prepare instructional materials for prospective and inservice employees". That it would be practicable to employ directly, in an instructional setting, the results of the analysis undertaken in this study, would have to remain to be investigated. A more extensive consideration of this whole matter is included under "Recommendations for Further Study" in Chapter IV entitled "Discussion".

With respect to "Statistical Test", individual *t* tests were employed to determine any significant difference

between the ratings assigned each of the four combinations of process chart and list of verbs by the employees canvassed in the course of the study.

Population and Sample

It had been decided, even before the study was begun, that local general insurance agencies should constitute the Population. This was done because of the author's familiarity with general insurance operations, because there exists considerable diversity in the tasks to be encountered in these general insurance agencies, and because it was believed that it would be easier to obtain the co-operation of the management of local general insurance agencies than it would be to obtain the co-operation of the management of general insurance agencies situated in larger centres of population.

Accordingly, the Population, from which the Sample employed in this study was drawn, was comprised of all businesses listed as handling insurance in the "Extended Flat Rate Calling to Alberta Government Telephones Areas" section of the "Edmonton & Vicinity Phone Book" which became effective on March 7, 1976 but which was replaced by the one which became effective on March 6, 1977. There were 23 businesses so listed and which constituted the Population for the purposes of this study.

It had been hoped that the Sample and the Population, from which it would be drawn, would be one and the same. This was found not to be possible as six businesses declined

to participate in the study, as three businesses handled only life insurance, and as two businesses had gone out of business.

The Sample, then, on which the results reported for this study were based, was comprised of those businesses which had "insurance" mentioned in the telephone directory listings, which had been found to handle general insurance, and which had agreed to participate in the study. There were 12 such businesses which constituted the Sample for the purposes of this study.

Appendix 4 provides information on how it came about that 24 employee-respondents and nine employer-respondents eventually participated in the study. Also included in Appendix 4 is a tabulation of findings based on data generated in the course of the study.

Instrumentation

Figure 1 sets out "Information with Respect to Employee and Employer". One of these forms was completed for each employee involved in the study whereas only one such form was completed for each employer no matter the number of that person's employees so involved. Figure 1 is shown on the following page.

Figure 2 sets out "The First Process Chart Employed" and Figure 3 sets out "The Second Process Chart Employed". These Figures are shown on subsequent pages.

Table 1 sets out "The First List of Verbs Considered by Employees" and Table 3 sets out "The Second List of Verbs

Date __/__/77

Figure 1: Information with Respect to Employee and Employer

With respect to Employee:

Identification number __

Name _____
Title _____
Telephone number ___-____
Age last birthday __ years
Educational background _____
_____
_____
Responsible for __ Employees
With this Employer __ years
In this line of business __ years

With Respect to Employer:

Identification number(s) of Employee(s) reported for this Employer

Name _____ —
Address _____ —
_____ —
_____ —
___ ___ —
Name of —
contact person _____ —
Title _____ —
Telephone number ___-____
In this line of business __ years

Other Information:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Identification number __ Page __ of __ pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	

Identification number __ Page __ of __ pages

Figure 3: The Second Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

Decision	Acquisition	Process	Disposition	Step in task
.	.	.	.	_____
.	.	.	.	_____
.	.	.	.	_____

Considered by Employees". Table 2 sets out "The List of Verbs Employed by the Author in Completing the Process Charts". These Tables are shown in Appendix 1.

Figures 4, 5, 6, and 7 were used by employees to rate each of the four combinations of process chart and list of verbs as to suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which they perform in the course of their everyday work. Figure 8 was employed to collect each employee's ratings so these might be analyzed. Provision, by means of paired comparisons, was made to ensure consistency between the individual ratings assigned on Figures 4, 5, 6, and 7 and the overall ratings assigned on Figure 8. No attempt was made to influence any employee's ratings. All that was sought to be accomplished was to have their individual ratings be consistent with their overall ratings. These Figures are shown in Appendix 2.

Figure 9 sets out "The Form used by Employers to Rate Each of Four Combinations of Process Chart and List of Verbs". Figure 9 is also shown in Appendix 2.

Data Collection Technique

Appendix 3 sets out the local general insurance agencies involved in the study, that is, the "Businesses Identified as Handling General Insurance and Which Participated in the Study", and "Letters Addressed to Employees and Employers in the Course of the Study".

"The First Regular Letter Addressed to Employers"

served to introduce the author and solicited the participation of these employers in the study. That there should be certain benefits accruing to these employers, from participating in the study, was emphasized in this letter.

"The First Regular Letter Addressed to Employees" made mention of the fact that their employers had agreed to participate in the study and suggested that there should be certain benefits accruing to them, the employees, from participating in the study. Enclosed with this letter were Figure 1 and Table 1. Requested to be returned or submitted to the author were completed Figure 1, a list of their tasks and the estimated percentage of time spent on each of these tasks and the steps involved in each of these tasks, and certain other information with respect to these tasks.

"The Second Regular Letter Addressed to Employees" requested that each employee rate each of four combinations of process chart and list of verbs on the basis of suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which that employee performs or which other employees perform in the course of everyday work. The employee was then requested to provide overall ratings of these combinations, all the while making certain that the overall ratings were consistent with the individual ratings. Enclosed with this letter were Table 3, four combinations of process chart and list of verbs for one of the tasks reported by that employee or for each of six tasks selected at random from "SIC

Performance Goals"* in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970, pp. 58-104), Figures 4, 5, 6, and 7 required for individual ratings of these combinations, and Figure 8 required for overall ratings of these same combinations. Requested to be returned to the author were these combinations of process chart and list of verbs, and completed Figures 4, 5, 6, 7, and 8.

"The Special Letter Addressed to an Employee Should the Overall Ratings Not be Consistent with the Individual Ratings Reported by that Employee" provided such employee with the opportunity again to consider both individual and overall ratings of the four combinations of process chart and list of verbs prepared for one of the tasks reported by that employee or for each of six tasks reported by other employees. Enclosed with this letter were the combinations of process chart and list of verbs, Figures 4, 5, 6, and 7, and a new Figure 8. Requested to be returned to the author were the combinations of process chart and list of verbs, the previously completed Figures 4, 5, 6, and 7, and the newly completed Figure 8.

"The Second Regular Letter Addressed to Employers" requested that each employer complete Figure 1 and then rate each of four combinations of process chart and list of verbs (on the basis of suitability for employment in recording and

*Process charts of these six tasks appear in Appendix 5.

reporting the tasks and the steps involved in each of these tasks performed by employees in the course of everyday work) after having considered each task of a number of tasks selected at random from all the tasks reported by all the employees canvassed or each of six tasks selected at random from "SIC Performance Goals". Enclosed with this letter were Figure 1, the four combinations of process chart and list of verbs for the tasks selected for consideration, Figure 9 required for overall ratings of these combinations, and Tables 1 and 3. Requested to be returned to the author were completed Figures 1 and 9, and the combinations of process chart and list of verbs for the tasks selected for consideration.

In instances, where it was not possible to obtain a list of the tasks and the estimated percentage of time spent on each of these tasks and the steps involved in each of these tasks, and certain other information with respect to these tasks, from an employee, that employee was contacted in person. That employee was requested, after having considered the four combinations of process chart and list of verbs selected at random from "SIC Performance Goals", to complete Figure 1, Figures 4, 5, 6, and 7, and Figure 8. In similar fashion, employers were contacted in person and requested to complete Figures 1 and 9. Information, including "certain other information with respect to these tasks", which was obtained by interview, was treated in the same manner as information obtained by correspondence.

"The Third Regular Letter Addressed to Employees" advised that their participation in the study was at an end and thanked them for their co-operation.

"The Third Regular Letter Addressed to Employers" advised that, except for providing them with process charts embodying the combination of process chart and list of verbs found to be preferred for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work, which process charts are to be completed for the tasks reported by their employees, the study had been completed. This letter went on to thank them for their co-operation.

Data Treatment and Analysis

With respect to treatment of the data received from the employees who participated in the study, Table 2, entitled "The List of Verbs Employed by the Author in Completing the Process Charts", made use of the verbs from Tables 1 and 3 to complete Figures 2 and 3. Combinations of process chart and list of verbs were prepared by the author and subjected to the scrutiny of both the employees and their employers. These four combinations were then rated as to suitability, as defined for the purposes of the study, and these ratings were recorded. Also recorded was information with respect to "Hardware", "Software", "Supplementary steps", "Reported criteria", and "Educational cues" as reported by the employees and information with respect to "Reported criteria" as reported by their employers. This information

is presented in Chapter III entitled "Results".

With respect to analysis of the data generated in the course of the study, individual *t* tests were employed to determine any significant difference between each of the ratings of the four combinations of process chart and list of verbs. A ratio scale of measurement had been introduced, in the individual rating forms, namely Figures 4, 5, 6, and 7, to make possible, and did make possible, direct comparison of individual ratings of these combinations on the basis of suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work in local general insurance agencies.

CHAPTER III

RESULTS

The owners or managers of 10 local general insurance agencies, which agencies are set out in Appendix 3 under "Businesses Identified as Handling General Insurance and Which Participated in the Study", had agreed to participate, or had agreed to have their employees participate, in the study. Nine of these persons actually did participate in the study as employers.* They completed forms rating the four combinations of process chart and list of verbs as to suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work in local general insurance agencies.

Committed to the study, by their employers, were 28 employees. Actually participating in the study were 22 of these employees and the proprietors of two one-person local general insurance agencies, a total of 24 persons who rated the combinations of process chart and list of verbs as employees. The difference between the number of employees originally scheduled to participate in the study and the number of employees actually participating in the study was attributable to staff turnover without there having been full replacement of staff no longer with an employer, to absence of staff on vacation, and to failure, on the part of

*Details of participation in the study appear in Appendix 4.

one employee, to complete the required rating forms.

Also appearing in Appendix 4 are particulars of findings reported for this study. These are set out in tabular format in Appendix 4. These findings, reported in narrative format, follow.

The first choice, of 22 employees, or 92% of the employees, and based on suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work in local general insurance agencies, was the combination of Figure 3 and Table 3. One employee selected the combination of Figure 3 and Table 1 as first choice, and one employee selected the combination of Figure 2 and Table 3 as first choice.

The second choice, of 18 employees, or 75% of the employees, and based on the same criterion, was the combination of Figure 3 and Table 1. Four employees, or 17% of the employees, selected the combination of Figure 2 and Table 3 as second choice. One employee selected the combination of Figure 3 and Table 3 as second choice, and one employee selected the combination of Figure 2 and Table 1 as second choice.

The third choice, of 18 employees, or 75% of the employees, and based on the same criterion, was the combination of Figure 2 and Table 3. Four employees, or 17% of the employees, selected the combination of Figure 3 and Table 1 as third choice. One employee selected the

combination of Figure 3 and Table 3 as third choice, and one employee selected the combination of Figure 2 and Table 1 as third choice.

The fourth choice, of 22 employees, or 92% of the employees, and based on the same criterion, was the combination of Figure 2 and Table 1. One employee selected the combination of Figure 2 and Table 3 as fourth choice, and one employee selected the combination of Figure 3 and Table 1 as fourth choice.

With respect to individual t tests, all at the .01 level of significance for a one-tailed test, there being a critical value of t of 2.807 at 23 degrees of freedom for this level of significance,* there was determined to be a significant difference between the mean rating of the combination of Figure 3 and Table 3, the first choice, and that of the combination of Figure 3 and Table 1, the second choice, t in this instance having been determined to be 5.153. There was a significant difference between the mean rating of the combination of Figure 3 and Table 1, the second choice, and that of the combination of Figure 2 and Table 3, the third choice, t in this instance having been determined to be 4.155. There was a significant difference between the mean rating of the combination of Figure 2 and Table 3, the third choice, and that of the combination of Figure 2 and Table 1, the fourth choice, t in this instance having been determined to be 6.705.

*Van Dalen, 1966, p. 465.

The first choice, of seven employers, or 78% of the employers who participated in the study, and based on suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work in local general insurance agencies, was the combination of Figure 3 and Table 3. One employer selected the combination of Figure 2 and Table 3 as first choice, and one employer selected the combination of Figure 2 and Table 1 as first choice.

The second choice, of six employers, or 67% of the employers, and based on the same criterion, was the combination of Figure 3 and Table 1. Two employers, or 22% of the employers, selected the combination of Figure 2 and Table 3 as second choice, and one employer selected the combination of Figure 3 and Table 3 as second choice.

The third choice, of five employers, or 56% of the employers, and based on the same criterion, was the combination of Figure 2 and Table 3. Two employers, or 22% of the employers, selected the combination of Figure 3 and Table 1 as third choice, and two employers, or 22% of the employers, selected the combination of Figure 2 and Table 1 as third choice.

The fourth choice, of six employers, or 67% of the employers, and based on the same criterion, was the combination of Figure 2 and Table 1. One employer selected the combination of Figure 2 and Table 3 as fourth choice,

one employer selected the combination of Figure 3 and Table 1 as fourth choice, and one employer selected the combination of Figure 3 and Table 3 as fourth choice.

Finally, the ranking of the four combinations of process chart and list of verbs, by the employees and by their employers who participated in the study, on the basis of suitability as defined for the purposes of the study, was determined to be the same.

It was in "Development of Task Performance Statements for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Lanham, Herschelmann, & Cook, 1972) that it was reported that "this separate listing of 373 task statements represents the principal output of NOBELS" (p. 66). Then, on page 87, the authors, when explaining "detailed task statements", went on to say that statements of "detailed summary performance tasks" include (1) a listing of "hardware", that is, materials of wood, metal, or harder consistency like machines used, (2) a listing of "software", that is, the programs, policy manuals, catalogues, or references used, (3) "educational cues", that is, the suggestions of the task writers (all classroom practitioners) of implied instructional key elements for teaching, (4) "supplementary steps", that is, alternatives of performance or steps performed by a few workers, and (5) "reported criteria", that is, requirements of successful performance as quoted directly from the task sheets.

The employees, as set out in "The First Regular Letter

Addressed to Employees", were requested to provide any information they might be able to provide with respect to "Hardware", "Software", "Supplementary steps", and "Reported criteria", and, should they perceive any of these, to provide information on "Educational cues" which were defined as "suggestions on implied instructional key elements for teaching". The employers, as set out in "The Second Regular Letter Addressed to Employers", were requested, when completing Figure 9, to provide any information they might be able to provide with respect to "Reported Criteria" which were defined as "requirements of successful performance" and which they believed to be important in the tasks considered.

The "hardware", reported by the employees who participated in the study, was that identified by Lanham, Lanham, Herschelmann, and Cook in their 1972 report, with only minor differences experienced in the terminology employed. There were no "supplementary steps" reported by these employees. There were no "educational cues" reported, if these were perceived at all, by these employees. The "software", reported by these employees, was that identified in the 1972 report, again with only minor differences experienced in the terminology employed. These employees did attach considerable importance to a thorough understanding of the rate books and related manuals so widely employed in local general insurance agencies, with this importance having been borne out by what their employers had to say about it. The "reported criteria",

reported by both employees and their employers, did not differ from those identified in the 1972 report.

It was in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970, pp. 38; 291) and, a short time later, in "Development of Task Performance Statements for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Lanham, Herschelmann, & Cook, 1972, p. 310) that these authors dealt with certain "universals, i.e., behaviors that are fundamental to the successful performance of most office tasks" (1970, p. 38). These "fundamentals of office task performance" (1970, p. 291; 1972, p. 310) were three in number and are as follow:

> Accuracy as a desired generalized behavior of office workers is a function of checking for potential error and of correcting error. When supervisors so universally say they require "absolute accuracy" as they did in NOBELS' interviews, we must conclude they mean: "An accurate office task performance means perceiving what an accurate product is, identifying likely points of error, checking and correcting so that the product is accurate because the worker has checked and eliminated any potential inaccuracy."
>
> Inadequate communication skills, both oral and written, are a frequent source of unsuccessful office performance. Communication skills adequate to instruct others or to modify office actions are sought by supervisors.
>
> Organizing and classifying of both numerical and verbal data--all symbolic data--are even more necessary behaviors in our emerging electronic technology than ever before.

It is with the pressing need, of their employees, for accuracy in all the tasks they perform for their employers,

that the employers, who participated in this study, were so very much concerned. This was brought out in interview after interview with these employers. Also brought out in these interviews with these employers was their substantial concern for the need, of their employees, to develop adequate, if not fully satisfactory, communication skills. Then, too, there was brought out in these interviews, but to a lesser extent, their concern for the need, of their employees, to possess computational skills at least adequate for the many tasks these employees are required to perform in the course of their everyday work in local general insurance agencies.

Finally, as set out in "The Third Regular Letter Addressed to Employers", it is intended that these employers be provided with a copy of the combination of process chart and list of verbs, which combination has been found to be preferred for employment in recording and reporting the tasks and the steps involved in each of these tasks performed by all employees participating in the study, for each of the tasks each of their employees reported. Six process charts have been selected at random from those to be provided to these employers and these process charts appear on the immediately following pages.

Identification number 2 Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

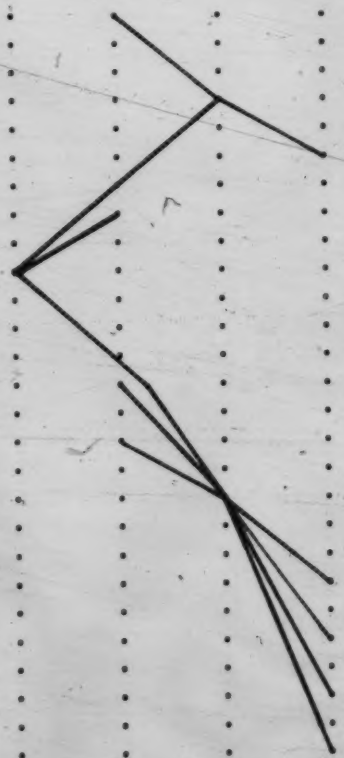
Task charted Processing premium payment from policyholder

Task began with Receiving premium payment

Task ended with Destroying copies of premium notice, etc.

Estimated percentage of time spent on task 5--rank 6

Decision
. Acquisition
. . Process
. . . Disposition
. . . . Step in task



. . . . Receives premium payment from policyholder
. . . . Totals money received
. . . . Transfers money to cash drawer
. . . . Pulls premium notice copies
. . . . Compares amount of payment with amount shown on premium notice copies
. . . . Obtains cash journal
. . . . Obtains receipt book
. . . . Records premium payment in cash journal
. . . . Issues receipt to policyholder
. . . . Returns cash journal
. . . . Returns receipt book
. . . . Destroys copies of premium notice

Table 3 Verbs

Identification number 8 Page 1 of 1 pages

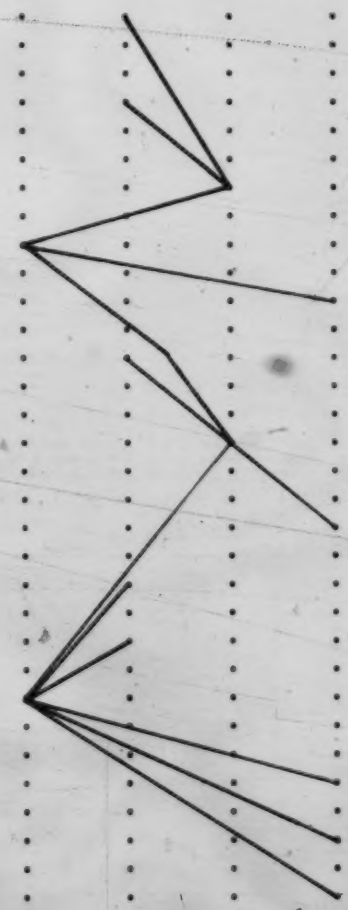
Figure 3: The Second Process Chart Employed

Task charted Issuing license plates, etc.

Task began with Obtaining required forms from customer

Task ended with Transferring finished forms to mail-tray

Estimated percentage of time spent on task 5--rank 6



Decision	Acquisition	Process	Disposition	Step in task
				Obtains required forms from customer
				Obtains required identification and other information
				Completes license plate form
				Checks own work
				Issues the license plates
				Obtains renewal form of driver's license from customer
				Completes driver's license form, including change of address
				Requests payment from customer
				Obtains payment from customer
				Obtains signature of licensee
				Checks all forms to see if completed correctly
				Issues the driver's license
				Holds payment in cash drawer
				Transfers finished forms to mail-tray

Table 3 Verbs

Identification number 13 Page 1 of 1 pages

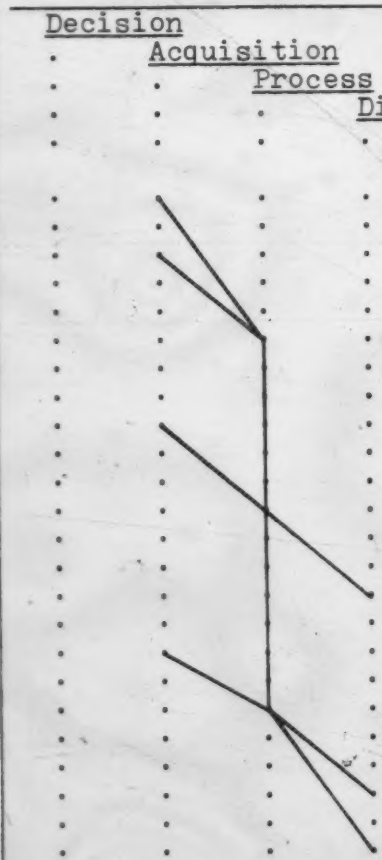
Figure 3: The Second Process Chart Employed

Task charted Issuing postal money order

Task began with Receiving request for money order

Task ended with Returning money order register to drawer

Estimated percentage of time spent on task 5--rank 8



Step in task
Receives request for money order
Obtains blank money order from cabinet
Stamps amount of money order on protectograph
Obtains money order register from drawer
Records amount of money order and charge in money order register
Requests payment from customer
Obtains payment from customer
Places money in cash drawer and makes change if necessary
Issues money order
Returns money order register to drawer

Table 3 Verbs

Identification number 18 Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Handling application for household coverage

Task began with Receiving request for coverage

Task ended with Holding application and check for mailing

Estimated percentage of time spent on task 15--rank 4

Step in task

Receives request for household coverage from customer at counter

Locates application form and rate book

Pulls customer's file folder

Obtains particulars of coverage wanted by the customer

Computes amount of premium

Completes application form

Collects premium from customer

Records payment in receipt book

Records particulars of policy requested in Application Register

Delivers copy of application and receipt to customer

Inserts copy of application form in customer's file folder

Issues check for premium less commission to insuring company

Files rate book and receipt book

Files customer's file folder

Holds application form and check for mailing to insuring company

Table 3 Verbs

Identification number 23 Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Handling routine filing duties

Task began with Collecting items from out-baskets

Task ended with Returning file folders

Estimated percentage of time spent on task 70--rank 1

Decision	Acquisition	Process	Disposition	Step in task
				Collects items from out-baskets in office
				Sorts items to be filed from items to be mailed or delivered to other desks
				Delivers items to be mailed to mailing table
				Holds items to be delivered to other desks
				Sorts items by where they are to be filed
				Sorts items in each group for filing
				Pulls required file folders
				Punches each item with two-hole punch
				Attaches each item in correct file folder
				Returns file folders

Table 3 Verbs

Identification number 31 Page 1 of 1 pages

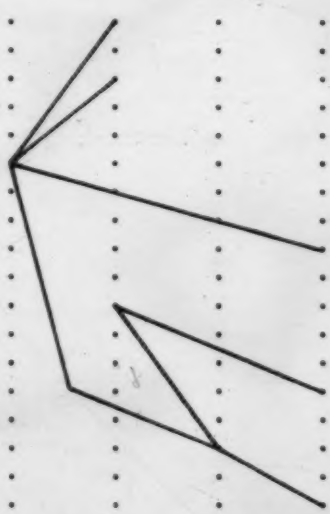
Figure 3: The Second Process Chart Employed

Task charted Answering telephone inquiry, etc.

Task began with Receiving telephone call

Task ended with Recording and delivering message, etc.

Estimated percentage of time spent on task 45--rank 1



Decision	Acquisition	Process	Disposition	Step in task
				Receives telephone call
				Obtains name of caller and nature of call
				Determines whether or not can answer
				Transfers call (if cannot answer)
				Obtains requested information (if can answer)
				Informs caller
				Records message
				Delivers message

Table 3 Verbs

CHAPTER IV

DISCUSSION

The Problem, for the purposes of the study, was stated to be "one of determining the means preferred by employees and by their employers for recording and reporting the tasks and the steps involved in each of these tasks which are performed by these employees who are engaged in local general insurance agencies".

The Purposes of the study were two in number and are as follow:

1. the determination of which combination of process chart and list of verbs is preferred, by the employees and employers canvassed, for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by employees in the conduct of everyday business in local general insurance agencies.
2. the provision, to each employer who participated in the study, of the combination of process chart and list of verbs found to be preferred generally by the employees canvassed, for each task reported by that person's employees.

With respect to the first Purpose stated for the study, namely "the determination of which combination of process chart and list of verbs is preferred, by the employees and employers canvassed, for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by employees in the conduct of

everyday business in local general insurance agencies", it was determined that the combination of Figure 3, "The Second Process Chart Employed", and Table 3, "The Second List of Verbs Considered by Employees", is the one preferred by both the employees and their employers who participated in the study. Now, it very well might be that this finding alone, with nothing more required to have been accomplished by the study, warranted its undertaking. Then, too, the study does provide a tried and proven means for recording and reporting what is being done, by way of the tasks which are performed, in local general insurance agencies.

With respect to the second Purpose stated for the study, namely "the provision, to each employer who participated in the study, of the combination of process chart and list of verbs found to be preferred generally by the employees canvassed, for each task reported by that person's employees", it is intended that this information be provided to these employers in the next little while. That there should be benefits accruing to them, from having problem areas in their day-to-day operations pointed up so these might be corrected and from being provided with the means by which new employees might be readily trained, has been recognized by these employers. Then, too, there should be benefits accruing to the employees who participated in the study or, for that matter, to persons yet to be employed in these local general insurance agencies, from having their tasks flowcharted so all employees might be enabled, even to

the extent of being encouraged, to do better work, has been recognized and widely approved by employees and employers alike. In addition to these process charts, for any and all tasks reported by their employees, the employers have requested that they be provided with, and they will be provided with, copies of this thesis. That they be provided with the means whereby they will be able to record and report the tasks performed by their employees, and to analyze and deal with these tasks as might be required, is not only their intention but also is the intention of this author.

Now, it was determined in the course of the study that additional information, particularly on the verbs to be employed and on the manner in which these verbs should be employed, was required in order that detailed summary performance goals might come to be written. The approach, taken in Table 2, "The List of Verbs Employed by the Author in Completing the Process Charts", was developed early in the study and its appropriateness was confirmed through consultation with both employees and their employers as the study progressed. Also, the findings with respect to "hardware", "software", "educational cues", "supplementary steps", and "reported criteria", which findings were reported by Lanham, Herschelmann, Weber, and Cook in 1970, and a short time later by Lanham, Lanham, Herschelmann, and Cook, the same authors, were found to apply in local general insurance agencies. It very well might be that these

findings provide adequate information required for writing these detailed summary performance goals. That the writing of these performance goals will be stimulated, as a matter of course and hopefully in the near future, will have to remain to be determined.

Conclusions

Generally, it has been concluded that the combination of Figure 3 and Table 3, that is, the combination of "The Second Process Chart Employed" and "The Second List of Verbs Considered by Employees", is the one preferred by employees and employers alike. The second, third, and fourth choices, of both the employees and their employers, are respectively the combination of Figure 3 and Table 1, that is, the combination of "The Second Process Chart Employed" and "The First List of Verbs Considered by Employees", the combination of Figure 2 and Table 3, that is, the combination of "The First Process Chart Employed" and "The Second List of Verbs Considered by Employees", and the combination of Figure 2 and Table 1, that is, the combination of "The First Process Chart Employed" and "The First List of Verbs Considered by Employees".

The First Question to be Answered was "Is there any one combination of process chart and list of verbs preferred by the employees canvassed on the basis of suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which they perform?" In answer to this question, let it be reported that there

was determined to be a significant difference at $p < .01$ between the mean rating of the first choice of combination of Figure 3 and Table 3 and the mean rating of the second choice of combination of Figure 3 and Table 1. Then, too, not only was there a significant difference between the first and second choices, but there were also significant differences between the second and third choices and between the third and fourth choices.

Related to the First Question to be Answered was the Second Question to be Answered which was "If there is one combination of process chart and list of verbs preferred by the employees canvassed, is this same combination preferred by their employers who were also canvassed in the course of the study?" In answer to this question, let it be reported that the combination of Figure 3, "The Second Process Chart Employed", and Table 3, "The Second List of Verbs Considered by Employees", was rated the highest by the employees canvassed and by their employers who also participated in the study. Then, too, not only were the employees and their employers in agreement as to the first choice of combination of process chart and list of verbs, but they were also in agreement as to the second, third, and fourth choices which were respectively the combination of Figure 3 and Table 1, the combination of Figure 2 and Table 3, and the combination of Figure 2 and Table 1.

Specifically, it has been concluded that Figure 3, in preference to Figure 2, was included in the first choice of

92% of the employees and 78% of their employers, and in the second choice of 75% of the employees and 67% of their employers, because it normally requires fewer pages to flowchart a task in that it often can set out that task on one page, because there is provision made for the broad category of "Decision", because both Table 3 and Table 1 verbs can be accommodated without having to reduce these to 16 verbs, and because some verbs, which common usage requires be placed in one of the categories, have to be placed in one of the other categories. Then, too, it has been concluded that Table 3 verbs, in preference to Table 1 verbs, were included in the first choice of 92% of the employees and 78% of their employers, and in the third choice of 75% of the employees and 56% of their employers, because these verbs provide adequate coverage without being cumbersome or confusing. These conclusions have been based on information gathered from employees and their employers in the course of the study. As mentioned previously, detailed information on these choices appears in Appendix 4.

Specifically, it has been concluded that the information, provided by Lanham, Lanham, Herschelmann, and Cook (1972, p. 87), on "hardware", "software", "educational cues", "supplementary steps", and "reported criteria", is appropriate for employment in describing the tasks which are performed in local general insurance agencies. This conclusion has been based on information gathered from employees and their employers in the course of the study.

Specifically, it has been concluded that the importance, attached by Lanham, Lanham, Herschelmann, and Cook (1972, p. 310), to "accuracy of checking and proofreading, to oral and written communication, and to computation of numerical data", is warranted and applicable to operations observed in local general insurance agencies. Also, as claimed by Schuman, in "Portfolio of Accounting Systems for Small and Medium-Sized Businesses" (M. D. James, Ed., 1968, p. 688), it was observed that, indeed, "the insurance agency lives and breathes as a service business, and therefore it is primarily a sales organization". So, with service generally its sole source of revenue, it is of little wonder that communication, not only within the agency but also with the public, is of such major importance. These conclusions have been based on information gathered from employees and their employers in the course of the study.

Recommendations for Further Study

That "new instruction is needed to prepare young people to meet current and emerging requirements of the office" (Huffman et al., 1968, p. 3), that "the market for office job preparation is an increasing market influenced by higher than average replacement and estimated increase in numbers and proportion of the total labor force" (Lanham, Herschelmann, Weber, & Cook, 1970, p. 3), and that "public pressures for accountability in education, movements toward career education, a strengthening of Federal and state

staffing and supporting of career education thrusts . . . continue the necessity for revitalizing occupation preparation with current and job-related task performances" (Lanham, Lanham, Herschelmann, & Cook, 1972, p. iii), have already been recognized and set out in this thesis.

There continues to be concern expressed over the need to provide young people with improved business and office education, to which education Business will have to make a substantially greater contribution than it has ever made before. This is borne out by what Hostrop (1975) and Strobach (1976) had to say on this subject. Hostrop, on page 16 in his chapter on "The Call for Accountability", stated that "research into the relationship between education's output and the nation's manpower needs is disquieting" and that "educational systems are falling far short of turning out the right numbers and combinations of manpower needed for optimum development". Hostrop went on to say that, "on the other hand, society's employment structures and incentives are poorly geared to make the best use of educational personnel and hence to serve the real needs of development". He concluded by saying that "it is understandable that dissonant students have become dissident, and why they have joined their parents in calling for accountability--relevant curricula which will prepare them for careers that exist". Strobach, on page 10 in his article on "Business and Postsecondary Education Linkages", observed that "business has traditionally relied on

education to provide adequately educated individuals, who become the employees that perform business tasks" but that, "with accelerating technological and social change, this traditional educational need is being transformed to include a need for ongoing educational experiences for employees, to help them adjust to new work requirements and new job opportunities". Strobach went on to say that, "in this case, education would benefit from a dialogue with business on emerging technology and corresponding educational needs of employees" and that "education could also benefit from an awareness of the changing composition of the work force, whose members are candidates for continuing education programs". He concluded by saying that "business would clearly benefit from such a linkage in obtaining employees who are more appropriately educated for jobs they can be expected to carry out".

That it will be to future work groups, that what it is hoped will be improved instruction in business and office education will be directed, must be recognized. Terry (1977), on pages 41-42 in his article on "The Supervisor of the (Near) Future", suggested that "some of the characteristics in which future work groups will differ from those of the present" are (a) future employees will be younger overall, with more than 35 per cent of the population of the United States less than 25 years old in 1980, (b) the attitudes of employees of all ages are changing in keeping with the evolution of social beliefs and

values, (c) though sex discrimination in hiring and placing of employees is likely to persist indefinitely, it will continue to decrease, voluntarily or through affirmative action programs, (d) suitable jobs for the nonskilled, the handicapped and the disadvantaged will be found, and progress in their promotion and upgrading will become common, and (e) better and more advanced formal education will characterize future employees.

Further study of matters related to business and office education, then, would appear not only to be warranted but also to be highly desirable. That it is anticipated that Business will come to make a considerably greater input, than it has ever made, into business and office education, and that it is anticipated that the very nature of the clientele to be served will change, would have to be taken into consideration in any further study which might come to be undertaken.

The first recommendation for further study is that consideration again be given to "A Taxonomy of Office Activities for Business and Office Education" (Huffman et al., 1968). Particular emphasis would have to be placed on the definitions of the verbs to be employed. Once these verbs were to be defined in acceptable terms, that is, in terms which would be acceptable to Business, to students, and to specialists in business and office education, the 20 Primary Division Verbs could be treated as general areas of competence required to be attained by students of and in

business and office education.

As set out in the Taxonomy, the Secondary Division Verbs serve "to indicate distinctive ways in which the action of the Primary Division Verb is carried out" (p. 14). With performance goals, each of these to include the conditions under which competence is to be demonstrated and appropriate criteria of successful performance, enunciated for each of these Secondary Division Verbs, directly, and for the corresponding Primary Division Verbs, indirectly, task analysis could be employed to good advantage in determining the optimum conditions under which these performance goals might be attained.

The second recommendation for further study is in keeping with what Lanham, Lanham, Herschelmann, and Cook (1972, p. 309) had to say when speaking of "generalized task performance goals or performance specifications from which performance goals will need to be developed", namely that "the competencies and performances attached to an office preparation program should be extracted from the actual performance of office work". It is this approach which is advocated be taken in this or any further study which might come to be undertaken.

No matter that those authors had gone to state that "a generalized task statement even in its detailed form is at most a generalization of important steps taken to perform office tasks and not the specific performance expected of a particular office worker", generalizations of this nature

would assist substantially once consideration were to be given to providing instruction related to these tasks. Then, too, further investigation of their "fundamentals of office task performance" (1972, p. 310) would appear to warrant further study.

This study should be replicated. It should involve other local general insurance agencies. It could involve any broad grouping of like businesses. It should make use of the combination of Figure 3, "The Second Process Chart Employed", and Table 3, "The Second List of Verbs Considered by Employees". It should account for a substantial portion, if not all, of each employee's time spent on the job. It should employ interviewers highly skilled in using this combination of process chart and list of verbs, and in obtaining related information from the employees who would be interviewed. It should produce data which could be analyzed in terms of instructional content and process, whether on a competency or some other basis. It should be then, and only then, that there should be determined the value of this whole approach to improving business and office education in terms of applicability in an instructional setting.

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APPENDIX 1

Table 1: The First List of Verbs Considered by Employees

accumulate*
(collect)--to bring together into a band or group
activate
(operate)--to cause to function; to bring about; effect
add
--to increase in number, size, or importance
adjust
--to bring to a more satisfactory state
advise
(inform)--to make known or give instruction
affix
(attach)--to make fast or join
alert
(inform)--to make known or give instruction
annotate
(note)--to take due or special notice of
answer
--to speak, write, or reply
arrange
--to put into correct or desired order
ask
(request)--the act of asking for something
assemble
(collect)--to bring together into a band or group
assign
(issue)--to give out or make available
assist
(direct)--to assist by giving advice, instruction, and supervision
attach
--to make fast or join
balance
(compare)--to examine for the purpose of discovering resemblances or differences
batch
(collect)--to bring together into a band or group
bind
(package)--to enclose in a package or protective covering
block in
(arrange)--to put into correct or desired order
block out
(arrange)--to put into correct or desired order

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*Where "accumulate" is the synonym of the NOBELS Action Verb "collect" and "to bring together into a band or group" the definition of "collect".

break down
(sort)--to arrange according to characteristics
calculate
(compute)--to determine by mathematical
means or arrive at an answer
call
--to communicate or utter
change
(adjust)--to bring to a more satisfactory state
change
(correct)--to change in order to set right
check
--to inspect for satisfactory condition
choose
(determine)--to settle a question or come to a decision
clip
(attach)--to make fast or join
code
--any system of symbols for meaningful communication
collate
(arrange)--to put into correct or desired order
collect
--to bring together into a band or group
compare
--to examine for the purpose of discovering
resemblances or differences
compile
--to assemble and put in logical order
complete
to fill, make entire, perfect
compose
(write)--to form or trace symbols on paper
compute
--to determine by mathematical
means or arrive at an answer
confer
(discuss)--to discourse about, examine and pass on
confirm
(verify)--to confirm, to prove to be true
connect
(transfer)--to pass from one to another
consult
(discuss)--to discourse about, examine and pass on
consult
(refer)--to send or direct for information
convert
(compute)--to determine by mathematical
means or arrive at an answer
copy
(duplicate)--to make a copy of
correct
--to change in order to set right

count
(compute)--to determine by mathematical means or arrive at an answer
deactivate
(operate)--to cause to function; to bring about; effect
debug
(correct)--to change in order to set right
decide
(determine)--to settle a question or come to a decision
delete
(remove)--to change or shift location, take off or away
deliver
--to give, transfer, yield possession of
describe
(direct)--to assist by giving advice, instruction, and supervision
design
(arrange)--to put into correct or desired order
destroy
--to put out of existence
determine
--to settle a question or come to a decision
devise
(arrange)--to put into correct or desired order
direct
--to assist by giving advice, instruction, and supervision
disburse
(issue)--to give out or make available
discard
(destroy)--to put out of existence
discuss
--to discourse about, examine and pass on
distribute
--to deal out, to dispense
divide
(compute)--to determine by mathematical means or arrive at an answer
draw
(write)--to form or trace symbols on paper
duplicate
--to make a copy of
enter
(record)--to set down in writing
erase
(remove)--to change or shift location, take off or away
evaluate
(determine)--to settle a question or come to a decision
examine
(check)--to inspect for satisfactory condition
explain
(direct)--to assist by giving advice, instruction, and supervision

extend
(compute)--to determine by mathematical means or arrive at an answer

extract
(pull)--to remove or cause to be removed from a place (file)

feed
(operate)--to cause to function; to bring about; effect

figure
(compute)--to determine by mathematical means or arrive at an answer

file
--to arrange in particular order for preservation and reference

fill in
(complete)--to fill, make entire, perfect

fill out
(complete)--to fill, make entire, perfect

find
(locate)--to determine the place of, to seek out and find

fix
(correct)--to change in order to set right

flowchart
(arrange)--to put into correct or desired order

forward
(send)--to cause something to be conveyed or transmitted by an agent to a destination

gather
(collect)--to bring together into a band or group

get
(obtain)--to gain or attain possession of

give
(deliver)--to give, transfer, yield possession of

give back
(return)--to go back or send back

give to
(distribute)--to deal out, to dispense

go thru
(locate)--to determine the place of, to seek out and find

grade
(determine)--to settle a question or come to a decision

greet
--to meet and give salutations

hand
(distribute)--to deal out, to dispense

hand to
(deliver)--to give, transfer, yield possession of

handwrite
(write)--to form or trace symbols on paper

help
(direct)--to assist by giving advice, instruction, and supervision

hold
--an order or indication that some
action is to be delayed
identify
(determine)--to settle a question or come to a decision
index
(sort)--to arrange according to characteristics
inform
--to make known or give instruction
initial
(write)--to form or trace symbols on paper
inquire
(request)--the act of asking for something
insert
--to put into or inject
inspect
(check)--to inspect for satisfactory condition
instruct
(direct)--to assist by giving advice, instruction,
and supervision
interview
(discuss)--to discourse about, examine and pass on
issue
--to give out or make available
journalize
(record)--to set down in writing
keep
(hold)--an order or indication that some
action is to be delayed
keypunch
(punch)--to record data by perforating a card or tape
label
(write)--to form or trace symbols on paper
list
(compile)--to assemble and put in logical order
load
(operate)--to cause to function; to bring about; effect
locate
--to determine the place of, to seek out and find
log
(record)--to set down in writing
look at
(refer)--to send or direct for information
look for
(locate)--to determine the place of, to seek out and find
look on
(refer)--to send or direct for information
look up
(locate)--to determine the place of, to seek out and find
look up
(refer)--to send or direct for information
mail
--to send postal matter by mail

maintain
(hold)--an order or indication that some action is to be delayed

make note of
(note)--to take due or special notice of

make up
(compile)--to assemble and put in logical order

make up
(write)--to form or trace symbols on paper

mark
(write)--to form or trace symbols on paper

match
(compare)--to examine for the purpose of discovering resemblances or differences

mimeograph
(duplicate)--to make a copy of

move
(operate)--to cause to function; to bring about; effect

multiply
(compute)--to determine by mathematical means or arrive at an answer

negotiate
(arrange)--to put into correct or desired order

notate
(note)--to take due or special notice of

note
--to take due or special notice of

notify
(inform)--to make known or give instruction

obtain
--to gain or attain possession of

open
--to make available for use

operate
--to cause to function; to bring about; effect

oversee
(direct)--to assist by giving advice, instruction, and supervision

package
--to enclose in a package or protective covering

page
(call)--to communicate or utter

pay
(issue)--to give out or make available

photocopy
(duplicate)--to make a copy of

pick up
(obtain)--to gain or attain possession of

place
--to cause to rest or lie, to dispose, to put into

plan
(arrange)--to put into correct or desired order

post
(record)--to set down in writing

present
(deliver)--to give, transfer, yield possession of
proofread
--to read and mark corrections in matter
provide
(direct)--to assist by giving advice, instruction, and supervision
pull
--to remove or cause to be removed from a place (file)
punch
--to record data by perforating a card or tape
purge
(destroy)--to put out of existence
put
(place)--to cause to rest or lie, to dispose, to put into
put in
(insert)--to put into or inject
put in
(operate)--to cause to function; to bring about; effect
quote
(inform)--to make known or give instruction
read
(scan)--to make an intensive examination of, to check
receive
--to take in, to admit, to accept
reconcile
(compare)--to examine for the purpose of discovering resemblances or differences
record
--to set down in writing
refer
--to send or direct for information
reiterate
(inform)--to make known or give instruction
relate
(inform)--to make known or give instruction
relay
(refer)--to send or direct for information
remind
(inform)--to make known or give instruction
remove
--to change or shift location, take off or away
repeat
(inform)--to make known or give instruction
request
--the act of asking for something
return
--to go back or send back
review
(scan)--to make an intensive examination of, to check

route
(send)--to cause something to be conveyed
or transmitted by an
agent to a destination
run tape
--to operate a tape machine, e.g., adding machine
run through
--a term used for putting data into
a computer and operating
scan
--to make an intensive examination of, to check
schedule
(arrange)--to put into correct or desired order
score
(determine)--to settle a question or come to a decision
search
(locate)--to determine the place of, to seek out and find
secure
(obtain)--to gain or attain possession of
select
(determine)--to settle a question or come to a decision
send
--to cause something to be conveyed
or transmitted by an
agent to a destination
separate
(sort)--to arrange according to characteristics
set
(adjust)--to bring to a more satisfactory state
set up
(compile)--to assemble and put in logical order
show
(direct)--to assist by giving advice, instruction,
and supervision
sign
(write)--to form or trace symbols on paper
signal
(inform)--to make known or give instruction
sketch
(write)--to form or trace symbols on paper
sort
--to arrange according to characteristics
stamp
--to impress or mark with a device
staple
(attach)--to make fast or join
start
(operate)--to cause to function; to bring about; effect
store
(hold)--an order or indication that some
action is to be delayed
straighten
(arrange)--to put into correct or desired order

stuff
(insert)--to put into or inject
submit
(deliver)--to give, transfer, yield possession of
subtract
(compute)--to determine by mathematical
means or arrive at an answer
suggest
(inform)--to make known or give instruction
supervise
(direct)--to assist by giving advice, instruction,
and supervision
supply
(direct)--to assist by giving advice, instruction,
and supervision
tag
(write)--to form or trace symbols on paper
take
(direct)--to assist by giving advice, instruction,
and supervision
take
(receive)--to take in, to admit, to accept
take dictation
--to write dictated material, usually in shorthand
take from
(pull)--to remove or cause to be removed
from a place (file)
take off
(remove)--to change or shift location, take off or away
talk with
(discuss)--to discourse about, examine and pass on
teach
(direct)--to assist by giving advice, instruction,
and supervision
telephone
(call)--to communicate or utter
tell
(inform)--to make known or give instruction
test
(determine)--to settle a question or come to a decision
thread
(operate)--to cause to function; to bring about; effect
throw away
(destroy)--to put out of existence
tie
(package)--to enclose in a package or protective covering
total
--a result of addition, a summation of factors
trace
(locate)--to determine the place of, to seek out and find
transcribe
--to copy dictated materials in common, legible language
transfer
--to pass from one to another

transmit
(send)--to cause something to be conveyed or transmitted by an agent to a destination

turn off
(operate)--to cause to function; to bring about; effect

turn on
(operate)--to cause to function; to bring about; effect

turn over
(refer)--to send or direct for information

typewrite
--the act of using a typewriter (type)

update
(correct)--to change in order to set right

upgrade
(correct)--to change in order to set right

verify
--to confirm, to prove to be true

welcome
(greet)--to meet and give salutations

witness
(direct)--to assist by giving advice, instruction, and supervision

wrap
(package)--to enclose in a package or protective covering

write
--to form or trace symbols on paper

Xerox
(duplicate)--to make a copy of

Table 2: The List of Verbs Employed by the Author in Completing the Process Charts

Figure 2		
Table 1		Table 3
accumulate*	COMPILE	collect
activate	OPERATE	operate
add	COMPUTE	add
adjust	CHECK	adjust
advise	INFORM	inform
affix	COMPILE	attach
alert	INFORM	inform
annotate	RECORD	note
answer	INFORM	answer
arrange	COMPILE	arrange
ask	INFORM	request
assemble	COMPILE	collect
assign	DELIVER	issue
assist	INFORM	direct
attach	COMPILE	attach
balance	COMPUTE	compare
batch	COMPILE	collect
bind	MAIL	package
block in	COMPILE	arrange
block out	COMPILE	arrange

Figure 3		
Table 1		Table 3
accumulate	ACQUISITION	collect
activate	PROCESS	operate
add	PROCESS	add
adjust	PROCESS	adjust
advise	DISPOSITION	inform
affix	PROCESS	attach
alert	DISPOSITION	inform
annotate	PROCESS	note
answer	DISPOSITION	answer
arrange	PROCESS	arrange
ask	DISPOSITION	request
assemble	ACQUISITION	collect
assign	DISPOSITION	issue
assist	DISPOSITION	direct
attach	PROCESS	attach
balance	DECISION	compare
batch	ACQUISITION	collect
bind	PROCESS	package
block in	PROCESS	arrange
block out	PROCESS	arrange

*Where "accumulate" is the synonym of the NOBELS Action Verb "collect" and "COMPILE" is the verb employed in Figure 2, and "accumulate" and "collect" are the verbs employed under "ACQUISITION" in Figure 3.

break down	SORT	sort	break down	PROCESS	sort
calculate	COMPUTE	compute	calculate	PROCESS	compute
call	CALL	call	call	DISPOSITION	call
change	CHECK	adjust	change	PROCESS	adjust
change	CHECK	correct	change	PROCESS	correct
check	CHECK	check	check	DECISION	check
choose	DETERMINE	determine	choose	DECISION	determine
clip	COMPILE	attach	clip	PROCESS	attach
code	OPERATE	code	code	PROCESS	code
collate	COMPILE	arrange	collate	PROCESS	arrange
collect	COMPILE	collect	collect	ACQUISITION	collect
compare	COMPUTE	compare	compare	DECISION	compare
compile	COMPILE	compile	compile	ACQUISITION	compile
complete	RECORD	complete	complete	PROCESS	complete
compose	COMPOSE	write	compose	PROCESS	write
compute	COMPUTE	compute	compute	PROCESS	compute
confer	INFORM	discuss	confer	DISPOSITION	discuss
confirm	CHECK	verify	confirm	DECISION	verify
connect	DELIVER	transfer	connect	DISPOSITION	transfer
consult	INFORM	discuss	consult	DISPOSITION	discuss
consult	FILE	refer	consult	DISPOSITION	refer
convert	COMPUTE	compute	convert	PROCESS	compute
copy	DUPLICATE	duplicate	copy	PROCESS	duplicate
correct	CHECK	correct	correct	PROCESS	correct
count	COMPUTE	compute	count	PROCESS	compute
deactivate	OPERATE	operate	deactivate	PROCESS	operate
debug	CHECK	correct	debug	PROCESS	correct
decide	DETERMINE	determine	decide	DECISION	determine
delete	FILE	remove	delete	PROCESS	remove
deliver	DELIVER	deliver	deliver	DISPOSITION	deliver
describe	INFORM	direct	describe	DISPOSITION	direct
design	COMPILE	arrange	design	PROCESS	arrange
destroy	FILE	destroy	destroy	DISPOSITION	destroy
determine	DETERMINE	determine	determine	DECISION	determine
devise	COMPILE	arrange	devise	PROCESS	arrange
direct	INFORM	direct	direct	DISPOSITION	direct

disburse	DELIVER	issue	disburse	DISPOSITION	issue
discard	FILE	destroy	discard	DISPOSITION	destroy
discuss	INFORM	discuss	discuss	DISPOSITION	discuss
distribute	DELIVER	distribute	distribute	DISPOSITION	distribute
divide	COMPUTE	compute	divide	PROCESS	compute
draw	COMPOSE	write	draw	PROCESS	write
duplicate	DUPLICATE	duplicate	duplicate	PROCESS	duplicate
enter	RECORD	record	enter	PROCESS	record
erase	FILE	remove	erase	PROCESS	remove
evaluate	DETERMINE	determine	evaluate	DECISION	determine
examine	CHECK	check	examine	DECISION	check
explain	INFORM	direct	explain	DISPOSITION	direct
extend	COMPUTE	compute	extend	PROCESS	compute
extract	FILE	pull	extract	ACQUISITION	pull
feed	OPERATE	operate	feed	PROCESS	operate
figure	COMPUTE	compute	figure	PROCESS	compute
file	FILE	file	file	DISPOSITION	file
fill in	RECORD	complete	fill in	PROCESS	complete
fill out	RECORD	complete	fill out	PROCESS	complete
find	FILE	locate	find	ACQUISITION	locate
fix	CHECK	correct	fix	PROCESS	correct
flowchart	COMPILE	arrange	flowchart	PROCESS	arrange
forward	DELIVER	send	forward	DISPOSITION	send
gather	COMPILE	collect	gather	ACQUISITION	collect
get	COMPILE	obtain	get	ACQUISITION	obtain
give	DELIVER	deliver	give	DISPOSITION	deliver
give back	DELIVER	return	give back	DISPOSITION	return
give to	DELIVER	distribute	give to	DISPOSITION	distribute
go thru	FILE	locate	go thru	ACQUISITION	locate
grade	DETERMINE	determine	grade	DECISION	determine
greet	INFORM	greet	greet	DISPOSITION	greet
hand	DELIVER	distribute	hand	DISPOSITION	distribute
hand to	DELIVER	deliver	hand to	DISPOSITION	deliver
handwrite	COMPOSE	write	handwrite	PROCESS	write
help	INFORM	direct	help	DISPOSITION	direct
hold	FILE	hold	hold	DISPOSITION	hold

identify	DETERMINE	determine	identify	DECISION	determine
index	SORT	sort	index	PROCESS	sort
inform	INFORM	inform	inform	DISPOSITION	inform
initial	COMPOSE	write	initial	PROCESS	write
inquire	INFORM	request	inquire	DISPOSITION	request
insert	MAIL	insert	insert	PROCESS	insert
inspect	CHECK	check	inspect	DECISION	check
instruct	INFORM	direct	instruct	DISPOSITION	direct
interview	INFORM	discuss	interview	DISPOSITION	discuss
issue	DELIVER	issue	issue	DISPOSITION	issue
journalize	RECORD	record	journalize	PROCESS	record
keep	FILE	hold	keep	DISPOSITION	hold
keypunch	OPERATE	punch	keypunch	PROCESS	punch
label	COMPOSE	write	label	PROCESS	write
list	COMPILE	compile	list	ACQUISITION	compile
load	OPERATE	operate	load	PROCESS	operate
locate	FILE	locate	locate	ACQUISITION	locate
log	RECORD	record	log	PROCESS	record
look at	FILE	refer	look at	DISPOSITION	refer
look for	FILE	locate	look for	ACQUISITION	locate
look on	FILE	refer	look on	DISPOSITION	refer
look up	FILE	locate	look up	ACQUISITION	locate
look up	FILE	refer	look up	DISPOSITION	refer
mail	MAIL	mail	mail	DISPOSITION	mail
maintain	FILE	hold	maintain	DISPOSITION	hold
make note of	RECORD	note	make note of	PROCESS	note
make up	COMPILE	compile	make up	ACQUISITION	compile
make up	COMPOSE	write	make up	PROCESS	write
mark	COMPOSE	write	mark	PROCESS	write
match	COMPUTE	compare	match	DECISION	compare
mimeograph	DUPLICATE	duplicate	mimeograph	PROCESS	duplicate
move	OPERATE	operate	move	PROCESS	operate
multiply	COMPUTE	compute	multiply	PROCESS	compute
negotiate	COMPILE	arrange	negotiate	PROCESS	arrange
notate	RECORD	note	notate	PROCESS	note
note	RECORD	note	note	PROCESS	note

notify	INFORM	inform	notify	DISPOSITION	inform
obtain	COMPILE	obtain	obtain	ACQUISITION	obtain
open	MAIL	open	open	ACQUISITION	open
operate	OPERATE	operate	operate	PROCESS	operate
oversee	INFORM	direct	oversee	DISPOSITION	direct
package	MAIL	package	package	PROCESS	package
page	CALL	call	page	DISPOSITION	call
pay	DELIVER	issue	pay	DISPOSITION	issue
photocopy	DUPLICATE	duplicate	photocopy	PROCESS	duplicate
pick up	COMPILE	obtain	pick up	ACQUISITION	obtain
place	DELIVER	place	place	PROCESS	place
plan	COMPILE	arrange	plan	PROCESS	arrange
post	RECORD	record	post	PROCESS	record
present	DELIVER	deliver	present	DISPOSITION	deliver
proofread	CHECK	proofread	proofread	DECISION	proofread
provide	INFORM	direct	provide	DISPOSITION	direct
pull	FILE	pull	pull	ACQUISITION	pull
punch	OPERATE	punch	punch	PROCESS	punch
purge	FILE	destroy	purge	DISPOSITION	destroy
put	DELIVER	place	put	PROCESS	place
put in	MAIL	insert	put in	PROCESS	insert
put in	OPERATE	operate	put in	PROCESS	operate
quote	INFORM	inform	quote	DISPOSITION	inform
read	CHECK	scan	read	DECISION	scan
receive	RECEIVE	receive	receive	ACQUISITION	receive
reconcile	COMPUTE	compare	reconcile	DECISION	compare
record	RECORD	record	record	PROCESS	record
refer	FILE	refer	refer	DISPOSITION	refer
reiterate	INFORM	inform	reiterate	DISPOSITION	inform
relate	INFORM	inform	relate	DISPOSITION	inform
relay	FILE	refer	relay	DISPOSITION	refer
remind	INFORM	inform	remind	DISPOSITION	inform
remove	FILE	remove	remove	PROCESS	remove
repeat	INFORM	inform	repeat	DISPOSITION	inform
request	INFORM	request	request	DISPOSITION	request
return	DELIVER	return	return	DISPOSITION	return

review	CHECK	scan	review	DECISION	scan
route	DELIVER	send	route	DISPOSITION	send
run tape	COMPUTE	run tape	run tape	PROCESS	run tape
run through	OPERATE	run through	run through	PROCESS	run through
scan	CHECK	scan	scan	DECISION	scan
schedule	COMPILE	arrange	schedule	PROCESS	arrange
score	DETERMINE	determine	score	DECISION	determine
search	FILE	locate	search	ACQUISITION	locate
secure	COMPILE	obtain	secure	ACQUISITION	obtain
select	DETERMINE	determine	select	DECISION	determine
send	DELIVER	send	send	DISPOSITION	send
separate	SORT	sort	separate	PROCESS	sort
set	CHECK	adjust	set	PROCESS	adjust
set up	COMPILE	compile	set up	ACQUISITION	compile
show	INFORM	direct	show	DISPOSITION	direct
sign	COMPOSE	write	sign	PROCESS	write
signal	INFORM	inform	signal	DISPOSITION	inform
sketch	COMPOSE	write	sketch	PROCESS	write
sort	SORT	sort	sort	PROCESS	sort
stamp	RECORD	stamp	stamp	PROCESS	stamp
staple	COMPILE	attach	staple	PROCESS	attach
start	OPERATE	operate	start	PROCESS	operate
store	FILE	hold	store	DISPOSITION	hold
straighten	COMPILE	arrange	straighten	PROCESS	arrange
stuff	MAIL	insert	stuff	PROCESS	insert
submit	DELIVER	deliver	submit	DISPOSITION	deliver
subtract	COMPUTE	compute	subtract	PROCESS	compute
suggest	INFORM	inform	suggest	DISPOSITION	inform
supervise	INFORM	direct	supervise	DISPOSITION	direct
supply	INFORM	direct	supply	DISPOSITION	direct
tag	COMPOSE	write	tag	PROCESS	write
take	INFORM	direct	take	DISPOSITION	direct
take	RECEIVE	receive	take	ACQUISITION	receive
take dictation	RECEIVE	take dictation	take dictation	ACQUISITION	take dictation
take from	FILE	pull	take from	ACQUISITION	pull
take off	FILE	remove	take off	PROCESS	remove

talk with	INFORM	discuss	talk with	DISPOSITION	discuss
teach	INFORM	direct	teach	DISPOSITION	direct
telephone	CALL	call	telephone	DISPOSITION	call
tell	INFORM	inform	tell	DISPOSITION	inform
test	DETERMINE	determine	test	DECISION	determine
thread	OPERATE	operate	thread	PROCESS	operate
throw away	FILE	destroy	throw away	DISPOSITION	destroy
tie	MAIL	package	tie	PROCESS	package
total	COMPUTE	total	total	PROCESS	total
trace	FILE	locate	trace	ACQUISITION	locate
transcribe	TYPE	transcribe	transcribe	PROCESS	transcribe
transfer	DELIVER	transfer	transfer	DISPOSITION	transfer
transmit	DELIVER	send	transmit	DISPOSITION	send
turn off	OPERATE	operate	turn off	PROCESS	operate
turn on	OPERATE	operate	turn on	PROCESS	operate
turn over	FILE	refer	turn over	DISPOSITION	refer
typewrite	TYPE	typewrite	typewrite	PROCESS	typewrite
update	CHECK	correct	update	PROCESS	correct
upgrade	CHECK	correct	upgrade	PROCESS	correct
verify	CHECK	verify	verify	DECISION	verify
welcome	INFORM	greet	welcome	DISPOSITION	greet
witness	INFORM	direct	witness	DISPOSITION	direct
wrap	MAIL	package	wrap	PROCESS	package
write	COMPOSE	write	write	PROCESS	write
Xerox	DUPLICATE	duplicate	Xerox	PROCESS	duplicate

Table 3: The Second List of Verbs Considered by Employees

add*
--to increase in number, size, or importance
adjust
--to bring to a more satisfactory state
answer
--to speak, write, or reply
arrange
--to put into correct or desired order
attach
--to make fast or join
call
--to communicate or utter
check
--to inspect for satisfactory condition
code
--any system of symbols for meaningful communication
collect
--to bring together into a band or group
compare
--to examine for the purpose of discovering resemblances or differences
compile
--to assemble and put in logical order
complete
--to fill, make entire, perfect
compute
--to determine by mathematical means or arrive at an answer
correct
--to change in order to set right
deliver
--to give, transfer, yield possession of
destroy
--to put out of existence
determine
--to settle a question or come to a decision
direct
--to assist by giving advice, instruction, and supervision
discuss
--to discourse about, examine and pass on
distribute
--to deal out, to dispense
duplicate
--to make a copy of

*Where
"add" is the NOBELS Action Verb and
"to increase in number, size, or importance" its definition.

file
--to arrange in particular order for
preservation and reference
greet
--to meet and give salutations
hold
--an order or indication that some
action is to be delayed
inform
--to make known or give instruction
insert
--to put into or inject
issue
--to give out or make available
locate
--to determine the place of, to seek out and find
mail
--to send postal matter by mail
note
--to take due or special notice of
obtain
--to gain or attain possession of
open
--to make available for use
operate
--to cause to function; to bring about; effect
package
--to enclose in a package or protective covering
place
--to cause to rest or lie, to dispose, to put into
proofread
--to read and mark corrections in matter
pull
--to remove or cause to be removed
from a place (file)
punch
--to record data by perforating a card or tape
receive
--to take in, to admit, to accept
record
--to set down in writing
refer
--to send or direct for information
remove
--to change or shift location, take off or away
request
--the act of asking for something
return
--to go back or send back
run tape
--to operate a tape machine, e.g., adding machine
run through
--a term used for putting data into
a computer and operating

scan
--to make an intensive examination of, to check
send
--to cause something to be conveyed
or transmitted by an
agent to a destination
sort
--to arrange according to characteristics
stamp
--to impress or mark with a device
take dictation
--to write dictated material, usually in shorthand
total
--a result of addition, a summation of factors
transcribe
--to copy dictated materials in common, legible language
transfer
--to pass from one to another
typewrite
--the act of using a typewriter (type)
verify
--to confirm, to prove to be true
write
--to form or trace symbols on paper

APPENDIX 2

Identification number __

Figure 4: The Form used by Employees to Rate Combination of Figure 2 and Table 1

Rating

Identification number __ Page __ o
Figure 2: The First Process Chart Emplo
Task charted _____
Task began with _____
Task ended with _____
Estimated percentage of time spent on task __--r
_____
Step in task

Acquisition--receive _____
Process--check, compile, compose, _____
compute, determine, _____
duplicate, operate, _____

. . .

record, sort, type _____
Disposition--call, deliver, _____
file, inform, mail _____

9
8
7
6
5
4
3
2
1
0

Table 1: The First List of Verbs Considered by Employees

accumulate*
(collect)--to bring together into a band or grou
activate
(operate)--to cause to function; to bring about;

. . .

wrap
(package)--to enclose in a package or protective
write
--to form or trace symbols on paper
Xerox
(duplicate)--to make a copy of

Identification number __

Figure 5: The Form used by Employees to Rate Combination of Figure 2 and Table 3

Rating

Identification number __ Page __ o
Figure 2: The First Process Chart Emplo
Task charted _____ 9
Task began with _____
Task ended with _____
Estimated percentage of time spent on task __--r 8
_____
Step in task

Acquisition--receive _____
Process--check, compile, compose, _____ 7
compute, determine, _____
duplicate, operate, _____

. . . 6

record, sort, type _____
Disposition--call, deliver, _____
file, inform, mail _____ 5

4

Table 3: The Second List of Verbs Considered by Employees

3

add*
--to increase in number, size, or importance 2
adjust
--to bring to a more satisfactory state

. . . 1

typewrite
--the act of using a typewriter (type)
verify 0
--to confirm, to prove to be true
write
--to form or trace symbols on paper

Identification number __

Figure 6: The Form used by Employees to Rate Combination of Figure 3 and Table 1

Identification number __ Page __ o
Figure 3: The Second Process Chart Empl
Task charted _____
Task began with _____
Task ended with _____
Estimated percentage of time spent on task __--r

Decision
. Acquisition
. . Process
. . . Disposition
. . . . _____ Step in task
. . . . _____
. . .
. . . . _____
. . . . _____

Table 1: The First List of Verbs Considered by Employees

accumulate*
(collect)--to bring together into a band or grou
activate
(operate)--to cause to function; to bring about;
. . .
wrap
(package)--to enclose in a package or protective
write
--to form or t[illegible]ce symbols on paper
Xerox
(duplicate)--to make a copy of

Rating
9
8
7
6
5
4
3
2
1
0

Identification number __

Figure 7: The Form used by Employees to Rate Combination of Figure 3 and Table 3

Rating

Identification number __ Page __ o
Figure 3: The Second Process Chart Empl
Task charted _____ 9
Task began with _____
Task ended with _____
Estimated percentage of time spent on task __--r
_____ 8

Decision
. Acquisition
. . Process
. . . Disposition 7
. . . . _____ Step in task
. . . . _____ 6
. . .
. . . . _____ 5
. . . . _____
_____ 4

Table 3: The Second List of Verbs Considered by Employees

3

add*
--to increase in number, size, or importance 2
adjust
--to bring to a more satisfactory state

. . . 1

typewrite
--the act of using a typewriter (type)
verify 0
--to confirm, to prove to be true
write
--to form or trace symbols on paper

Identification number __

Figure 8: The Form used by Employees to Rate Each of Four Combinations of Process Chart and List of Verbs

Choice of Combination	Figure 2 /Table 1	Figure 2 /Table 3	Figure 3 /Table 1	Figure 3 /Table 3
Figure 3/Table 1 Figure 3/Table 3			–	–
Figure 2/Table 1 Figure 3/Table 1	–		–	
Figure 2/Table 1 Figure 2/Table 3	–	–		
Figure 2/Table 3 Figure 3/Table 1		–	–	
Figure 2/Table 1 Figure 3/Table 3	–			–
Figure 2/Table 3 Figure 3/Table 3		–		–
Total Choices	–	–	–	–

	Total Choices	Rank	Rank	
Combination of Figure 2/Table 1	_ ——	( )	( )	Rating from Figure 4 _ ——
Combination of Figure 2/Table 3	_ ——	( )	( )	Rating from Figure 5 _ ——
Combination of Figure 3/Table 1	_ ——	( )	( )	Rating from Figure 6 _ ——
Combination of Figure 3/Table 3	_ ——	( )	( )	Rating from Figure 7 _ ——

Identification number(s) of Employee(s) involved ___

Figure 9: The Form used by Employers to Rate Each of Four Combinations of Process Chart and List of Verbs

Choice of Combination	Figure 2 /Table 1	Figure 2 /Table 3	Figure 3 /Table 1	Figure 3 /Table 3
Figure 3/Table 1 Figure 3/Table 3			–	–
Figure 2/Table 1 Figure 3/Table 1	–		–	
Figure 2/Table 1 Figure 2/Table 3	–	–		
Figure 2/Table 3 Figure 3/Table 1		–	–	
Figure 2/Table 1 Figure 3/Table 3	–			–
Figure 2/Table 3 Figure 3/Table 3		–		–
Total Choices	–	–	–	–
Rank	( )	( )	( )	( )

Reported Criteria _____

APPENDIX 3

Businesses Identified as Handling General Insurance* and Which Participated in the Study

Alfred Arnston Insurance Agency
Hay Lakes, Alberta

Co-Op Insurance Services
10203 - 100 Avenue
Fort Saskatchewan, Alberta

Co-Operative Insurance Services
Elevator Road
Stony Plain, Alberta

Dome Insurance Services Ltd.
28 Grandin Mall
St. Albert, Alberta

Forrest Insurance Services Ltd.
11 St. Anne Street
St. Albert, Alberta

Johnson Realty & Insurance Ltd.
1 Athabasca Avenue
Devon, Alberta

Norman Knott Insurance
Gibbons, Alberta

Jules LaRose
General Insurance & Real Estate
Legal, Alberta

John A. Mills, Insurance Agent
Onoway, Alberta

Smith Insurance Service Ltd.
10204 - 100 Avenue
Fort Saskatchewan, Alberta

Tele-Trip Company, Inc.
Edmonton International Airport
P. O. Box 9802
Edmonton, Alberta

*As set out in "Extended Flat Rate Calling to Alberta Government Telephones Areas" in Edmonton & Vicinity Phone Book--effective March 7, 1976.

Whitson Insurance Services
4932 - 48 Avenue
Bon Accord, Alberta

The First Regular Letter Addressed to Employers

TO WHOM IT MAY CONCERN

This letter will serve to introduce Mr. Bill Hart, Candidate for the Degree of Master of Education in Vocational Education. Mr. Hart has been known to me for approximately three years and I have no hesitation in stating that I know him to be completely honest and trustworthy.

Mr. Hart is responsible to me for meeting the thesis requirements for the M.Ed. degree and I should appreciate your cooperating with him in the research project which he has undertaken. I believe it to be very much worthwhile in terms of benefits to the whole field of Business Education and certainly in terms of benefits to be realized by participants in this study -- it most assuredly should be of assistance to you by having the duties of your employees flowcharted so these might be analyzed and improvements made, and so new employees might be more readily trained than is the case at the present.

Sincerely,

D. W. Manuel, Ph.D.,
Associate Professor

DWM/ck

The First Regular Letter Addressed to Employees

Dear _____:

Your employer has been contacted and has agreed to participate in the research study which I am conducting as part of the requirements for the degree of Master of Education in Vocational Education. As was set out in the letter from Dr. Don Manuel, which letter served to introduce me to your employer, there should be some very real benefits to be realized from participating in this study--your duties would be flowcharted, with the distinct possibility that your performance of these would be improved and you would be able to do a better job, and you would be that much better able to help in training new staff, once your and others' duties were to be flowcharted and possibly improved, so they too might be able to do a better job.

I have enclosed a copy of "Figure 1: Information with Respect to Employee and Employer" and it should be completed and, along with other information with which I propose to deal shortly, submitted to me.

Now, just what will be required of you? Well, Barish*, on page 45 of "Systems Analysis for Effective Administration", stated the purpose of the "duties questionnaire" to be that of providing "a detailed story of the activities of all the individuals in the section" and went on to say that, "in the

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*Barish, N. N.
Systems Analysis for Effective Administration
New York: Funk & Wagnalls Company, 1951.

questionnaire, each employee is requested to list his duties and the average amount of time he estimates he spends on each one". So, first of all, what I should like you to do is to complete a "duties questionnaire", that is, a list of your duties, in descending order of the percentage of time you spend on each of these, to the extent that at least six of your duties might be considered. The first entry in a "duties questionnaire", that is, the duty or task which took up the greatest percentage of some employee's working time, might be as follows:

Task (or Duty):	Estimated Percentage of Time Involved:	Rank:
Given an incoming telephone call, answers and supplies information to the caller.*	40	1

. . .

Then, please break down each of these tasks into the steps involved--to assist you in doing just this, I have enclosed a copy of "Table 1: The First List of Verbs Considered by Employees". This List provides all the verbs which you should consider employing to describe each of the steps which go to make up your individual duties--these verbs are listed on the left and are underlined, and these are the ones to be employed. Where the verb on the left is a synonym of a NOBELS Action Verb, the NOBELS Action Verb is given in parenthesis--"add" is a NOBELS Action Verb so only its definition is given, whereas "activate" is a synonym of the NOBELS Action Verb "operate" so the definition of "operate" is given. So, the first task might be broken down as set out on the following page.

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*This is an actual task reported on page 263 of Lanham, F. W., Herschelmann, K. M., Weber, C. P., & Cook, F. S. Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS). Columbus: C.V.T.E., The Ohio State University, 1970. The "Estimated Percentage of Time Involved" has been quite arbitrarily assigned as no information of this nature was provided in that report.

Task:	Step in Task:
Given an incoming telephone call, answers and supplies information to the caller.	(1) Receives call. (2) Obtains name of caller. (3) Determines nature of call. (4) Refers call (if cannot answer). (5) Obtains requested information (if can answer). (6) Supplies shipment dates/rates/progress of repair. (7) Records calls/messages/ orders/appointments. (8) Delivers messages.

Then, for each task which you have reported, you should enter information with respect to
"Hardware" (materials of wood, metal or harder consistency like machines used),
"Software" (programs, policy manuals, catalogues, or references used),
"Supplementary steps" (alternatives of performance or steps performed by a few workers),
"Reported criteria" (requirements of successful performance),
and, should you perceive any of these,
"Educational cues" (suggestions on implied instructional key elements for teaching).*

Once each of your duties (or tasks) were to be broken down into its constituent steps, I would put these into flowchart format and provide you with process charts, of one of the duties which you perform, for your further consideration. Meanwhile, please complete and return the copy of Figure 1--also, please

*Adapted from page 55 of
Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS).

send in the list of your duties and the corresponding list of the steps involved in each of these duties, and the information with respect to "Hardware" and so on.

Please do not hesitate to get in touch with me (my home telephone number is 459-8364) should you feel that you require more information--I propose to keep in close touch but just what you are being asked to do might need some clarification and I should be pleased to answer your questions. Thank you very much.

Sincerely,

Bill Hart

The Second Regular Letter Addressed to Employees

Dear _____:

Thank you very much for all you have done so far with respect to the study which I am conducting as part of the requirements for the degree of Master of Education in Vocational Education.

Four combinations of process chart and list of verbs are enclosed for one of the tasks which you have reported or, should you not have had the opportunity to complete your listing of your tasks and so on, from which I would have been able to complete covering process charts, for each of six tasks which have been selected at random from "SIC Performance Goals" on pages 58-104 in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970). The first combination employs the process chart shown as Figure 2 and the verbs from Table 1, the second combination employs the process chart shown as Figure 2 and the verbs from Table 3, the third combination employs the process chart shown as Figure 3 and the verbs from Table 1, and the fourth combination employs the process chart shown as Figure 3 and the verbs from Table 3. Also enclosed are Table 3 (you will notice that it is substantially shorter than Table 1 as it includes only the NOBELS Action Verbs and the definition of each of these Verbs) and a copy of each of Figures 4, 5, 6, and 7, which copies are to be employed in rating each of the four combinations of process chart and list of verbs on the basis of suitability for employment in recording and reporting

the tasks and the steps involved in each of these tasks which you perform or which are performed by others.

Now, what I should like you to do is to rate, on a scale from 0 (low) to 9 (high), each of the four combinations, on the appropriate form, as to its suitability for employment in recording and reporting these tasks and the steps involved in each of these tasks. Figure 8, a copy of which Figure is also enclosed, then should be completed--you should select, from each of the six choices of combination of process chart and list of verbs, the combination which you believe to be the more suitable. Your overall ratings on this form should be consistent with your individual ratings from Figures 4, 5, 6, and 7; should the ranking based on your overall ratings not be consistent with the ranking based on your individual ratings, then either your overall ratings or your individual ratings should be changed. Please remember that your numerical ratings should be reflected in your overall ratings of these combinations--for instance, if you were to have rated one combination the highest on some individual rating form (Figure 4, or Figure 5, or Figure 6, or Figure 7), it should have been rated the highest on Figure 8 as determined by the number of times it was chosen; otherwise, some manner of change or changes should be made to produce consistency between your overall ratings and your individual ratings. Please remember that "suitability", for the purposes of this study, is defined as "suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work".

Finally, all process charts, Figures 4, 5, 6, and 7, and Figure 8 should be returned to me for further processing. I promise to keep you informed of progress being made in this study. Again, please do not hesitate to get in touch with me should you require more information. Again, thank you very much.

Sincerely,

Bill Hart

The Special Letter Addressed to an Employee Should the Overall Ratings Not be Consistent with the Individual Ratings Reported by that Employee

Dear _____:

Thank you very much for considering the process charts made up for one of the tasks which you reported or for the tasks reported under "SIC Performance Goals" and for rating each of the four combinations of process chart and list of verbs as to suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed in the course of everyday work.

There is no great problem but it would appear that there is some inconsistency between how you rated each of the four combinations, on an individual basis, and how you rated these overall. Really, what I am trying to say is that it is rather easy for some manner of inconsistency to occur--so please be assured that the situation can be corrected with little difficulty. For this reason, I have enclosed the process charts, Figures 4, 5, 6, and 7, and a new Figure 8.

Now, what I should like you to do is again to consider each of the ratings on Figures 4, 5, 6, and 7--then, on Figure 8, and quite independently of the individual ratings, you should choose, from each of the six "either/or" choices presented, the combination which you feel is more suitable for the purposes of this study. Please mark your choice in the appropriate space and add up your choices. Then, please transfer your totals to "Total Choices" and determine the "Rank" of each combination from the number of "Total Choices" each received. With respect to individual ratings of

these combinations, from Figures 4, 5, 6, and 7, the numerical ratings would determine the "Rank" of each of these. Finally, each "Rank" should be the same for each of the four combinations, that is, one combination should be ranked the same whether based on its numerical rating or based on the number of choices it received in the overall rating.

Please return the process charts, Figures 4, 5, 6, and 7, and the newly completed Figure 8 just as soon as it might be convenient to do this. Again, please do not hesitate to get in touch with me should you feel that you require more information. Again, thank you very much.

Sincerely,

Bill Hart

The Second Regular Letter
Addressed to Employers

Dear _____:

The research study, in which your employees and you are playing such an important part, is progressing very satisfactorily--in fact, the data-gathering portion of the study is nearing completion, thanks to all of you.

Now, what I should like you to do is to complete the enclosed Figure 1--this information will be used for identification purposes only. Then, please go over the combinations of process chart and list of verbs which, together with Tables 1 and 3 and Figure 9, are also enclosed. On Figure 9, you should select, from each of the six "either/or" choices of combination of process chart and list of verbs, the combination which you believe to be the more suitable for employment in recording and reporting the tasks and the steps involved in each of these tasks which are performed by your employees or which have been selected at random from "SIC Performance Goals" on pages 58-104 in "Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS)" (Lanham, Herschelmann, Weber, & Cook, 1970). Please indicate your choices in each column--then, please transfer your totals to "Total Choices" and determine the "Rank" of each combination from the number of "Total Choices" each combination received. Please remember that "suitability", for the purposes of this study, is defined as "suitability for employment in recording and reporting the tasks and the steps involved in each of these tasks performed by employees in the course of

their everyday work". Finally, please indicate any "Reported Criteria" which are defined as "requirements of successful performance" and which you believe to be important in the tasks considered.

Please return Figure 1, the process charts, and Figure 9 just as soon as it might be convenient to do this. Please do not hesitate to get in touch with me should you feel that you require more information. Thank you very much.

Sincerely,

Bill Hart

The Third Regular Letter Addressed to Employees

Dear _____:

It is with considerable pleasure that I write this short letter to let you know that the research study, to which you have contributed so very much, is all but complete. All that remains for me to do is to defend my thesis and subsequently to provide your employer with a copy of the combination of process chart and list of verbs, which combination has been found to be the most suitable for recording and reporting the tasks and the steps involved in each of these tasks performed by all employees participating in the study, for each of the tasks which you reported.

Our relationship has been most pleasant and very rewarding to me personally. I should like you to know how much I appreciate all you have done to make the study such a success. Thank you very kindly.

Sincerely,

Bill Hart

The Third Regular Letter Addressed to Employers

Dear _____:

This short letter is to let you know that the research study, to which your employees and you have contributed so very much, has been completed. As I indicated in my recent letter to your employees, what remains for me to do is to provide you with a copy of the combination of process chart and list of verbs, which combination has been found to be the most suitable for recording and reporting the tasks and the steps involved in each of these tasks performed by all employees participating in the study, for each of the tasks each of your employees reported. It is anticipated that it should be possible to supply this information to you in the next little while.

Until I can get in touch with you about sending these copies out to you or, better still, about delivering these to you, I should like you to know how much I appreciate your co-operation--and it has indeed been pleasant working with you and I have found the whole experience to be highly rewarding to me personally. Thank you very kindly.

Sincerely,

Bill Hart

APPENDIX 4

Figure 10: Derivation of the Number of Businesses Which Participated in the Study as Respondents

Population--businesses listed as handling insurance	23
Businesses which declined to participate in the study	- 6
Businesses which handled only life insurance	- 3
Businesses which had gone out of business after commencement of the study	- 2
Sample--businesses which participated in the study	12
Businesses with no employees, the management of which were treated as employees	- 2
Business from which no rating forms were obtained	- 1
Businesses which participated in the study as respondents	9

Figure 11: Derivation of the Number of Employees Who Participated in the Study as Respondents

Employees scheduled to participate in the study as respondents	28
Employers of businesses with no employees, the management of which were treated as employees	+ 2
Employees engaged after commencement of the study	+ 5
Employees terminated after commencement of the study	- 6
Employees absent on vacation	- 4
Employee from whom no rating forms were obtained	- 1
Employees who participated in the study as respondents	24

Figure 12: Findings Based on Data Generated in the Course of the Study

	Combination Of			
	Figure 2 /Table 1	Figure 2 /Table 3	Figure 3 /Table 1	Figure 3 /Table 3
Employees				
First Choice	0/24(0%)	1/24(4%)	1/24(4%)	22/24(92%)
				$t = 5.153$*
Second Choice	1/24(4%)	4/24(17%)	18/24(75%)	1/24(4%)
			$t = 4.155$	
Third Choice	1/24(4%)	18/24(75%)	4/24(17%)	1/24(4%)
		$t = 6.705$		
Fourth Choice	22/24(92%)	1/24(4%)	1/24(4%)	0/24(0%)
Employers				
First Choice	1/9(11%)	1/9(11%)	0/9(0%)	7/9(78%)
Second Choice	0/9(0%)	2/9(22%)	6/9(67%)	1/9(11%)
Third Choice	2/9(22%)	5/9(56%)	2/9(22%)	0/9(0%)
Fourth Choice	6/9(67%)	1/9(11%)	1/9(11%)	1/9(11%)

*Where the value of t, with $df = 23$, between the mean ratings for the first choice of combination of Figure 3 and Table 3 and the second choice of combination of Figure 3 and Table 1, was determined to be 5.153.

APPENDIX 5

Identification number WCH(3p.62) Page 1 of 2 pages

Figure 2: The First Process Chart Employed

Task charted Checking computations by proofing machine

Task began with Rec. deposit slips, etc.

Task ended with Transf. checks/deposit slips to pickup box

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives deposit slips/checks/cash receipts/withdrawal slips
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Sorts checks made payable to cash/personal from business checks
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Duplicates checks made payable to cash
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Punches check amounts/codes on machine
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Inserts/punches deposit slips on machine

Table 1 Verbs

Identification number WCH(3p.62) Page 2 of 2 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive	Totals/verifies all entries/debit,
Process--check, compile, compose,	credit counters
compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Writes machine number, date on tape
Process--check, compile, compose,	
compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive,	Attaches machine tapes to checks
Process--check, compile, compose,	
compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Records recap totals on
Process--check, compile, compose,	consolidation form
compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Transfers checks/deposit slips to
Process--check, compile, compose,	pickup box
compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	

Table 1 Verbs

Identification number WCH(3p.62) Page 1 of 1 pages

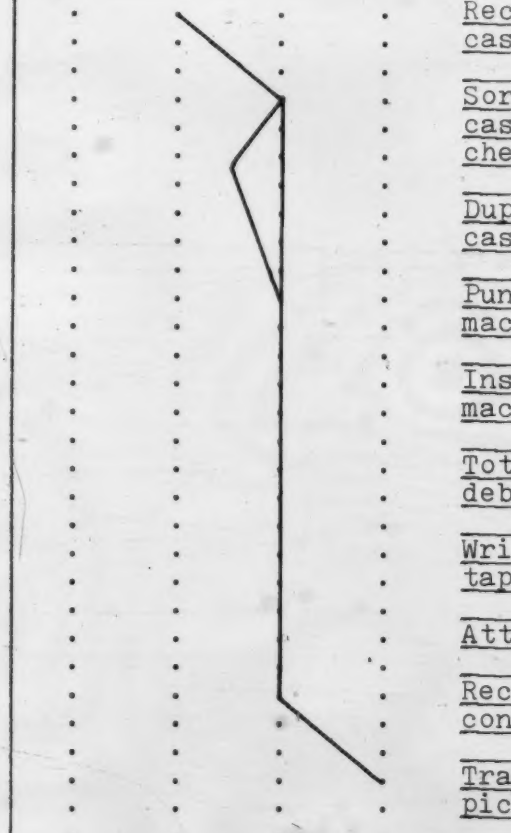
Figure 3: The Second Process Chart Employed

Task charted Checking computations by proofing machine

Task began with Rec. deposit slips, etc.

Task ended with Transf. checks/deposit slips to pickup box

Estimated percentage of time spent on task __--rank __



Decision	Acquisition	Process	Disposition	Step in task
				Receives deposit slips/checks/ cash receipts/withdrawal slips
				Sorts checks made payable to cash/personal from business checks
				Duplicates checks made payable to cash
				Punches check amounts/codes on machine
				Inserts/punches deposit slips in machine
				Totals/verifies all entries/ debit, credit counters
				Writes machine number, date on tape
				Attaches machine tapes to checks
				Records recap totals on consolidation form
				Transfers checks/deposit slips to pickup box

Table 1 Verbs

Identification number WCH(3p.62) Page 1 of 2 pages

Figure 2: The First Process Chart Employed

Task charted Checking computations by proofing machine

Task began with Rec. deposit slips, etc.

Task ended with Transf. checks/deposit slips to pickup box

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives deposit slips/checks/cash receipts/withdrawal slips
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Sorts checks made payable to cash/ personal from business checks
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Duplicates checks made payable to cash
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Punches check amounts/codes on machine
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Inserts/punches deposit slips in machine

Table 3 Verbs

Identification number WCH(3p.62) Page 2 of 2 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Totals/verifies all entries/debit, credit counters
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes machine number, date on tape
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Attaches machine tapes to checks
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records recap totals on consolidation form
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Transfers checks/deposit slips to pickup box

Table 3 Verbs

Identification number WCH(3p.62) Page 1 of 1 pages

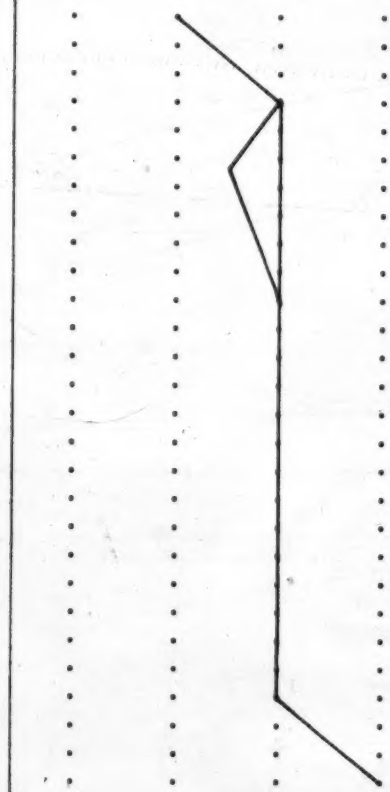
Figure 3: The Second Process Chart Employed

Task charted Checking computations by proofing machine

Task began with Rec. deposit slips, etc.

Task ended with Transf. checks/deposit slips to pickup box

Estimated percentage of time spent on task __--rank __



Decision	Acquisition	Process	Disposition	Step in task
				Receives deposit slips/checks/ cash receipts/withdrawal slips
				Sorts checks made payable to cash/personal from business checks
				Duplicates checks made payable to cash
				Punches check amounts/codes on machine
				Inserts/punches deposit slips in machine
				Totals/verifies all entries/ debit, credit counters
				Writes machine number, date on tape
				Attaches machine tapes to checks
				Records recap totals on consolidation form
				Transfers checks/deposit slips to pickup box

Table 3 Verbs

Identification number WCH(8p.64) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Handling receipts for customer accounts

Task began with Rec. customer passbook, etc.

Task ended with Del. cash rec., etc. and fil. deposit slip

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives customer passbook, deposit slip
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Pulls customer record card
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not date stamped on check, deposit slip
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Stamps date on check, deposit slip (if not already stamped)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks endorsement/deposit/check sums with deposit slips

Table 1 Verbs

Identification number WCH(8p.64) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive	Computes interest
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Subtracts interest from total loan
Process--check, compile, compose,	payment
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Determines whether amounts to be
Process--check, compile, compose,	posted manually or by
compute, determine,	machine
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Posts amounts manually (if these are
Process--check, compile, compose,	to be posted manually)
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Posts amounts by machine (if these
Process--check, compile, compose,	are to be posted by
compute, determine,	machine)
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	

Table 1 Verbs

Identification number WCH(8p.64) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not amount already stamped with embosser
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Stamps amount with embosser (should amount not already be stamped)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes cash amount on cash slip/ deposit receipt/payment ticket
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Delivers cash receipts to money drawer/passbook to customer
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Files deposit slip

Table 1 Verbs

Identification number WCH(8p.64) Page 1 of 2 pages

Figure 3: The Second Process Chart Employed

Task charted Handling receipts for customer accounts

Task began with Rec. customer passbook, etc.

Task ended with Del. cash rec., etc. and fil. deposit slip

Estimated percentage of time spent on task __--rank __

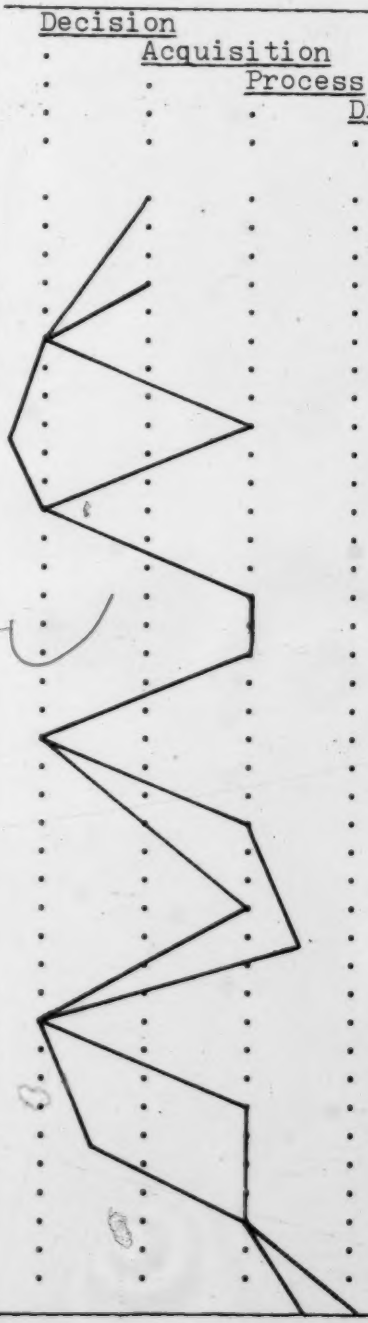

Decision
Acquisition
Process
Disposition
Step in task
Receives customer passbook, deposit, deposit slip
Pulls customer record card
Determines whether or not date stamped on check, deposit slip
Stamps date on check, deposit slip (if not already stamped)
Checks endorsement/deposit/check sums with deposit slips
Computes interest
Subtracts interest from total loan payment
Determines whether amounts to be posted manually or by machine
Posts amounts manually (if these are to be posted manually)
Posts amounts by machine (if these are to be posted by machine)
Determines whether or not amount already stamped with embosser
Stamps amount with embosser (should amount not already be stamped)
Writes cash amount on cash slip/ deposit receipt/payment ticket

Table 1 Verbs

Identification number WCH(8p.64) Page 2 of 2 pages

Figure 3: The Second Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

Decision	Acquisition	Process	Disposition	Step in task
				Delivers cash receipts to money drawer/passbook to customer
				Files deposit slip

Table 1 Verbs

Identification number WCH(8p.64) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Handling receipts for customer accounts

Task began with Rec. customer passbook, etc.

Task ended with Del. cash rec., etc. and fil. deposit slip

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives customer passbook, deposit, deposit slip
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Pulls customer record card
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not date stamped on check, deposit slip
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Stamps date on check, deposit slip (if not already stamped)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks endorsement/deposit/check sums with deposit slips

Table 3 Verbs

Identification number WCH(8p.64) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Computes interest
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Computes net amount of loan payment
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether amounts to be posted manually or by machine
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records amounts manually (if these are to be recorded manually)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records amounts by machine (if these are to be recorded by machine)

Table 3 Verbs

Identification number WCH(8p.64) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not amount already stamped with embosser
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Stamps amount with embosser (should amount not already be stamped)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate record, sort, type Disposition--call, deliver file, inform, mail	Writes cash amount on cash slip/ deposit receipt/payment ticket
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Delivers cash receipts to money drawer/passbook to customer
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Files deposit slip

Table 3 Verbs

Identification number WCH(8p.64) Page 1 of 2 pages

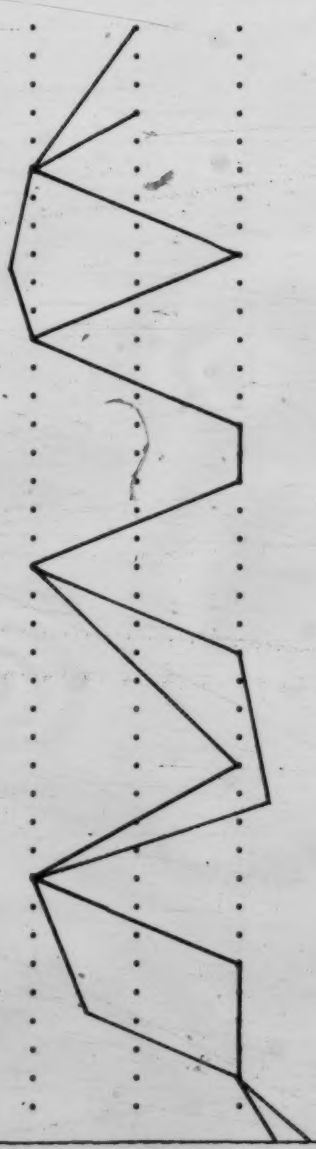
Figure 3: The Second Process Chart Employed

Task charted Handling receipts for customer accounts

Task began with Rec. customer passbook, etc.

Task ended with Del. cash rec., etc. and fil. deposit slip

Estimated percentage of time spent on task __--rank __



Decision	Acquisition	Process	Disposition	Step in task
.	.	.	.	Receives customer passbook, deposit, deposit slip
.	.	.	.	Pulls customer record card
.	.	.	.	Determines whether or not date stamped on check, deposit slip
.	.	.	.	Stamps date on check, deposit slip (if not already stamped)
.	.	.	.	Checks endorsement/deposit/check sums with deposit slips
.	.	.	.	Computes interest
.	.	.	.	Computes net amount of loan payment
.	.	.	.	Determines whether amounts to be posted manually or by machine
.	.	.	.	Records amounts manually (if these are to be recorded manually)
.	.	.	.	Records amounts by machine (if these are to be recorded by machine)
.	.	.	.	Determines whether or not amount already stamped with embosser
.	.	.	.	Stamps amount with embosser (should amount not already be stamped)
.	.	.	.	Writes cash amount on cash slip/

Table 3 Verbs

Identification number WCH(8p.64) Page 2 of 2 pages

Figure 3: The Second Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

Decision	Acquisition	Process	Disposition	Step in task
				deposit receipt/payment ticket
				Delivers cash receipts to money drawer/passbook to customer
				Files deposit slip

Table 3 Verbs

Identification number WCH(49p.80) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Handling over-the-counter requests, etc.

Task began with Rec. cust./tel. inquiries/checks

Task ended with Del. info./messages, mail. m-f's, etc.

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives customers/telephone inquiries/checks
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains caller's name, account number, insurance policies
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks records for information
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Explains bank policies, charges
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains microfilm of requested information

Table 1 Verbs

Identification number WCH(49p.80) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not can answer inquiry
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Transfers call (if cannot answer)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Answers questions regarding customer accounts
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Calls branch bank to check on missing information/ customer
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Requests customer send another check/come in to bank

Table 1 Verbs

Identification number WCH(49p.80) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive	Delivers information/messages
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Mails microfilms
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Files checks, ledger card
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Holds letter for enclosure
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	

Table 1 Verbs

Identification number WCH(49p.80) Page 1 of 1 pages

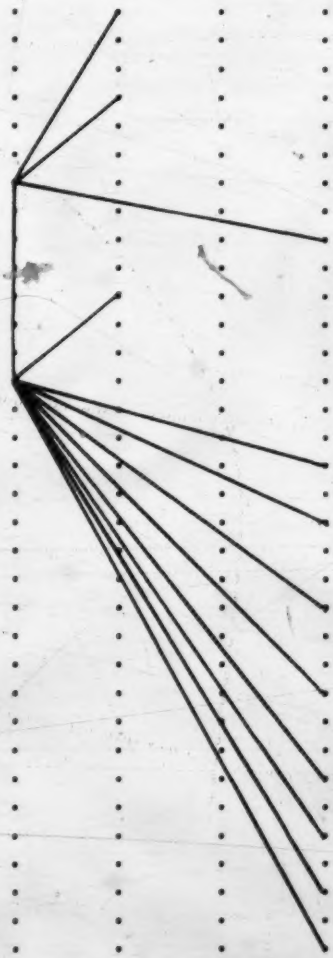
Figure 3: The Second Process Chart Employed

Task charted Handling over-the-counter requests, etc.

Task began with Rec. cust./tel. inquiries/checks

Task ended with Del. info./messages, mail. m-f's, etc.

Estimated percentage of time spent on task __--rank __



Decision	Acquisition	Process	Disposition	Step in task
				Receives customers/telephone inquiries/checks
				Obtains caller's name, account number, insurance policies
				Checks records for information
				Explains bank policies, charges
				Obtains microfilm of requested information
				Determines whether or not can answer inquiry
				Transfers call (if cannot answer)
				Answers questions regarding customer accounts
				Calls branch bank to check on missing information/customer
				Requests customer send another check/come in to bank
				Delivers information/messages
				Mails microfilms
				Files checks, ledger card
				Holds letter for enclosure

Table 1 Verbs

Identification number WCH(49p.80) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Handling over-the-counter requests, etc.

Task began with Rec. cust./tel. inquiries/checks

Task ended with Del. info./messages, mail. m-f's, etc.

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives customers/telephone inquiries/checks
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains caller's name, account number, insurance policies
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks records for information
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Directs customer in bank policies, charges
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains microfilm of requested information

Table 3 Verbs

Identification number WCH(49p.80) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task --rank

Step in task

Acquisition--receive Determines whether or not can answer
Process--check, compile, compose, inquiry
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Transfers call (if cannot answer)
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Answers questions regarding
Process--check, compile, compose, customer accounts
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Calls branch bank to check on
Process--check, compile, compose, missing information/
compute, determine, customer
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Requests customer send another
Process--check, compile, compose, check/come in to bank
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Table 3 Verbs

Identification number WCH(49p.80) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive	Delivers information/messages
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Mails microfilms
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Files checks, ledger card
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	Holds letter for enclosure
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	
Acquisition--receive	
Process--check, compile, compose,	
compute, determine,	
duplicate, operate,	
record, sort, type	
Disposition--call, deliver,	
file, inform, mail	

Table 3 Verbs

Identification number WCH(49p.80) Page 1 of 1 pages

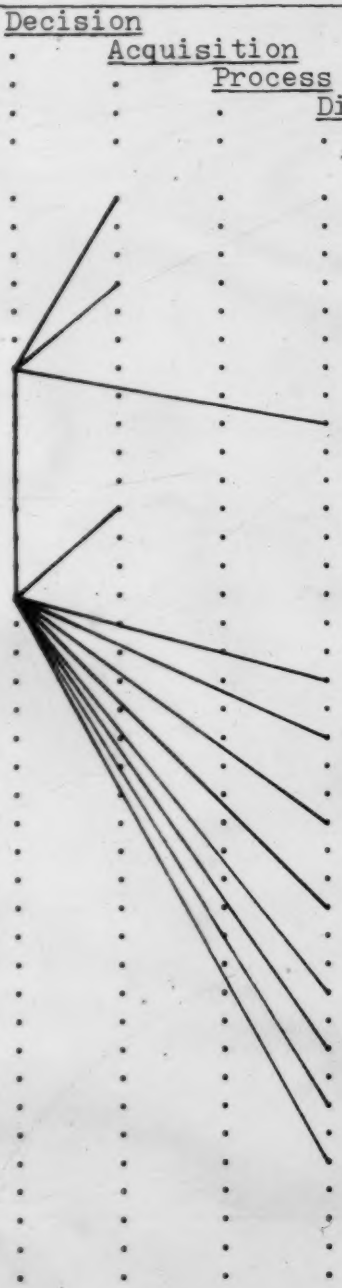
Figure 3: The Second Process Chart Employed

Task charted Handling over-the-counter requests, etc.

Task began with Rec. cust./tel. inquiries/checks

Task ended with Del. info./messages, mail. m-f's, etc.

Estimated percentage of time spent on task __--rank __



Step in task

Receives customers/telephone inquiries/checks

Obtains caller's name, account number, insurance policies

Checks records for information

Directs customer in bank policies, charges

Obtains microfilm of requested information

Determines whether or not can answer inquiry

Transfers call (if cannot answer)

Answers questions regarding customer accounts

Calls branch bank to check on missing information/customer

Requests customer send another check/come in to bank

Delivers information/messages

Mails microfilm

Files checks, ledger card

Holds letter for enclosure

Table 3 Verbs

Identification number WCH(54p.83) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Compiling and typing reports and bulletins

Task began with Rec. rough drafts, etc.

Task ended with Del. rep., mail. bulletins, and fil. cards

Estimated percentage of time spent on task __--rank __

Step in task	
Acquisition--receive	Receives rough drafts/bulletins/
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	cards
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Obtains news clippings of bankruptcy
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	listings
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Pulls previous month's report/loan
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	ledger sheet
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Checks material/format/totals/report
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	for accuracy
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	Computes interest/deposit ticket
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	totals/number/percent calls made
Disposition--call, deliver, file, inform, mail	

Table 1 Verbs

Identification number WCH(54p.83) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes bankruptcy names/unpaid balances on report
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records unpaid totals on records/ solicitation information on cards
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Types reports/bulletins/lists
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Proofreads materials
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains approval

Table 1 Verbs

Identification number WCH(54p.83) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task --rank

Step in task

Acquisition--receive Duplicates/staples reports
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Delivers reports
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Mails bulletins
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive Files cards
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Acquisition--receive
Process--check, compile, compose,
compute, determine,
duplicate, operate,
record, sort, type
Disposition--call, deliver,
file, inform, mail

Table 1 Verbs

Identification number WCH(54p.83) Page 1 of 1 pages

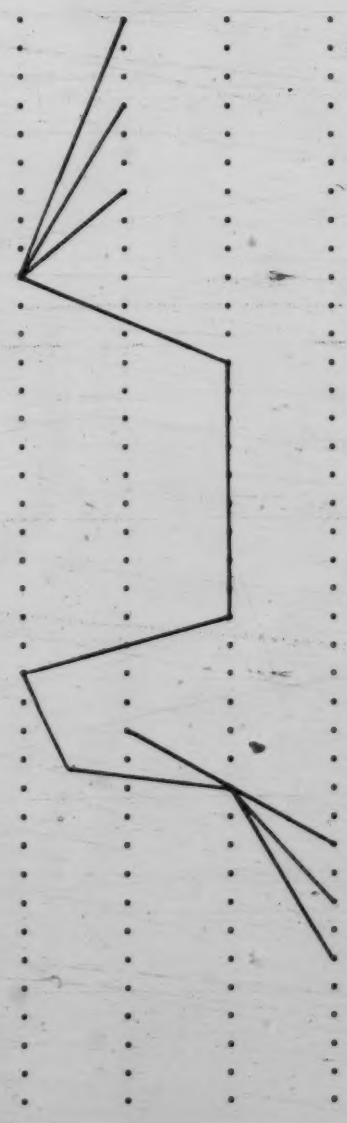
Figure 3: The Second Process Chart Employed

Task charted Compiling and typing reports and bulletins

Task began with Rec. rough drafts, etc.

Task ended with Del. rep., mail. bulletins, and fil. cards

Estimated percentage of time spent on task __--rank __



Step in task

Receives rough drafts/bulletins/ cards

Obtains news clippings of bankruptcy listings

Pulls previous month's report/ loan ledger sheet

Checks material/format/totals/ report for accuracy

Computes interest/deposit ticket totals/number/percent calls made

Writes bankruptcy names/unpaid balances on report

Records unpaid totals on records/ solicitation information on cards

Types reports/bulletins/lists

Proofreads materials

Obtains approval

Duplicates/staples reports

Delivers reports

Mails bulletins

Files cards

Table 1 Verbs

Identification number WCH(54p.83) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Compiling and typing reports and bulletins

Task began with Rec. rough drafts, etc.

Task ended with Del. rep., mail. bulletins, and fil. cards

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives rough drafts/bulletins/ cards
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains news clippings of bankruptcy listings
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Pulls previous month's report/loan ledger sheet
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks material/format/totals/report for accuracy
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Computes interest/deposit ticket totals/number/percent calls made

Table 3 Verbs

Identification number WCH(54p.83) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes bankruptcy names/unpaid balances on report
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records unpaid totals on records/ solicitation information on cards
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Types reports/bulletins/lists
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Proofreads materials
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains approval

Table 3 Verbs

Identification number WCH(54p.83) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

Step in task	
Acquisition--receive Duplicates/staples reports	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive Delivers reports	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive Mails bulletins	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive Files cards	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	
Acquisition--receive	
Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type	
Disposition--call, deliver, file, inform, mail	

Table 3 Verbs

Identification number WCH(54p.83) Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Compiling and typing reports and bulletins

Task began with Rec. rough drafts, etc.

Task ended with Del. rep., mail. bulletins, and fil. cards

Estimated percentage of time spent on task __--rank __

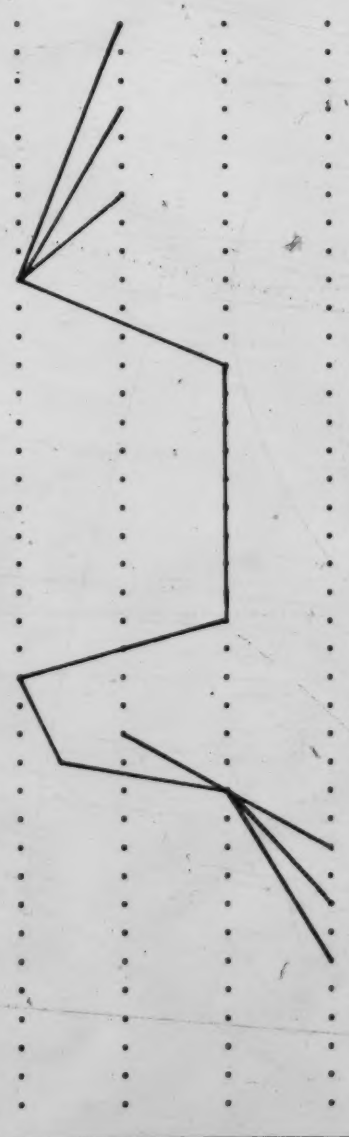


Table 3 Verbs

Identification number WCH(1p.88) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Sched. and rec. patients for med. appoint.

Task began with Rec. appoint. request/patient

Task ended with Dir. patient, etc. and del. X-rays, etc.

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives appointment request/patient
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks appointment book/type of X-ray
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not appointment should be arranged
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Transfers to waiting list
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Confirms appointment time, date

Table 1 Verbs

Identification number WCH(1p.88) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task --rank

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Instructs patient in X-ray preparation
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes appointment card/patient chart/new patient card/ appointment book
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records appointment/cancellation in appointment book
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Calls Medical Records to inform of next day's appointments
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains records/patient signature in register book

Table 1 Verbs

Identification number WCH(1p.88) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task --rank

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Attaches appointment card to record
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Directs patient to X-ray/doctor's office
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Delivers X-rays/charts to doctor
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	

Table 1 Verbs

Identification number WCH(1p.88) Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Sched. and rec. patients for med. appoint.

Task began with Rec. appoint. request/patient

Task ended with Dir. patient, etc. and del. X-rays, etc.

Estimated percentage of time spent on task __--rank __

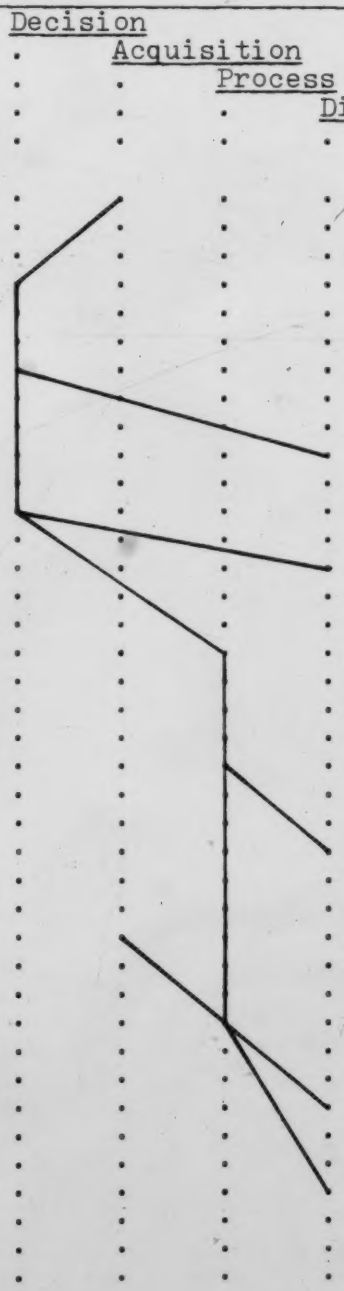

Decision
Acquisition
Process
Disposition
Step in task
Receives appointment request/ patient
Checks appointment book/type of X-ray
Determines whether or not appointment should be arranged
Transfers to waiting list
Confirms appointment time, date
Instructs patient in X-ray preparation
Writes appointment card/patient chart/new patient card/ appointment list
Records appointment/cancellation in appointment book
Calls Medical Records to inform of next day's appointments
Obtains records/patient signature in register book
Attaches appointment card to record
Directs patient to X-ray/doctor's office
Delivers X-rays/charts to doctor

Table 1 Verbs

Identification number WCH(1p.88) Page 1 of 3 pages

Figure 2: The First Process Chart Employed

Task charted Sched. and rec. patients for med. appoint.

Task began with Rec. appoint. request/patient

Task ended with Dir. patient, etc. and del. X-rays, etc.

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives appointment request/patient
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Checks appointment book/type of X-ray
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not appointment should be arranged
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Transfers to waiting list
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Verifies appointment time, date

Table 3 Verbs

Identification number WCH(1p.88) Page 2 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Directs patient in X-ray preparation
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes appointment card/patient chart/new patient card/ appointment list
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Records appointment/cancellation in appointment book
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Calls Medical Records to inform of next day's appointments
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Obtains records/patient signature in register book

Table 3 Verbs

Identification number WCH(1p.88) Page 3 of 3 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Attaches appointment card to record
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Directs patient to X-ray/doctor's office
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Delivers X-rays/charts to doctor
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	

Table 3 Verbs

Identification number WCH(1p.88) Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Sched. and rec. patients for med. appoint.

Task began with Rec. appoint. request/patient

Task ended with Dir. patient, etc. and del. X-rays, etc.

Estimated percentage of time spent on task __--rank __

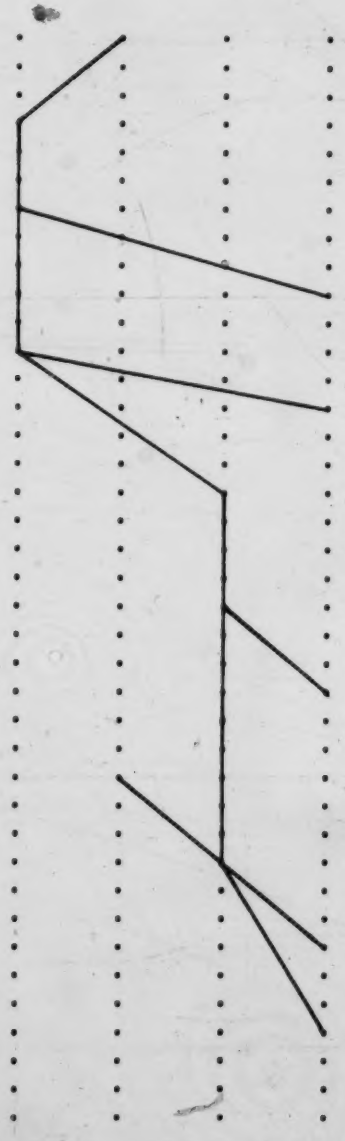

Decision
Acquisition
Process
Disposition
Step in task
Receives appointment request/ patient
Checks appointment book/type of X-ray
Determines whether or not appointment should be arranged
Transfers to waiting list
Verifies appointment time, date
Directs patient in X-ray preparation
Writes appointment card/patient chart/new patient card/ appointment list
Records appointment/cancellation in appointment book
Calls Medical Records to inform of next day's appointments
Obtains records/patient signature in register book
Attaches appointment card to record
Directs patient to X-ray/doctor's office
Delivers X-rays/charts to doctor

Table 3 Verbs

Identification number WCH(13p.96) Page 1 of 2 pages

Figure 2: The First Process Chart Employed

Task charted Answering questions re patient billing

Task began with Rec. telephone billing inquiry

Task ended with Send. statement to patient

Estimated percentage of time spent on task __--rank __

Step in task	
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives telephone billing inquiry
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes caller name, requested information
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Pulls ledger card
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not can explain
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Refers to supervisor (if cannot explain)

Table 1 Verbs

Identification number WCH(13p.96) Page 2 of 2 pages

Figure 2: The First Process Chart Employed

Task charted _____

Task began with _____

Task ended with _____

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Explains charge, claim procedures
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not error made
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes memo to correct error (if one made)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Types notation on ledger card/new statement (if error made)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Sends statement to patient

Table 1 Verbs

Identification number WCH(13p.96) Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Answering questions re patient billing

Task began with Rec. telephone billing inquiry

Task ended with Send: statement to patient

Estimated percentage of time spent on task __--rank __

Step in task
Receives telephone billing inquiry
Writes caller name, requested information
Pulls ledger card
Determines whether or not can explain
Refers to supervisor (if cannot explain)
Explains charge, claim procedures
Determines whether or not error made
Writes memo to correct error (if one made)
Types notation on ledger card/new statement (if error made)
Sends statement to patient

Table 1 Verbs

Identification number WCH(13p.96) - Page 1 of 2 pages

Figure 2: The First Process Chart Employed

Task charted Answering questions re patient billing

Task began with Rec. telephone billing inquiry

Task ended with Send. statement to patient

Estimated percentage of time spent on task __--rank __

	Step in task
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Receives telephone billing inquiry
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes caller name, requested information
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Pulls ledger card
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not can explain
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Refers to supervisor (if cannot explain)

Table 3 Verbs

Identification number WCH(13p.96) Page 2 of 2 pages

Figure 2: The First Process Chart Employed

Task charted

Task began with

Task ended with

Estimated percentage of time spent on task __--rank __

Step in task	
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Directs customer on charge, claim procedures
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Determines whether or not error made
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Writes memo to correct error (if one made)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Types notation on ledger card/new statement (if error made)
Acquisition--receive Process--check, compile, compose, compute, determine, duplicate, operate, record, sort, type Disposition--call, deliver, file, inform, mail	Sends statement to patient

Table 3 Verbs

Identification number WCH(13p.96) Page 1 of 1 pages

Figure 3: The Second Process Chart Employed

Task charted Answering questions re patient billing

Task began with Rec. telephone billing inquiry

Task ended with Send. statement to patient

Estimated percentage of time spent on task __--rank __

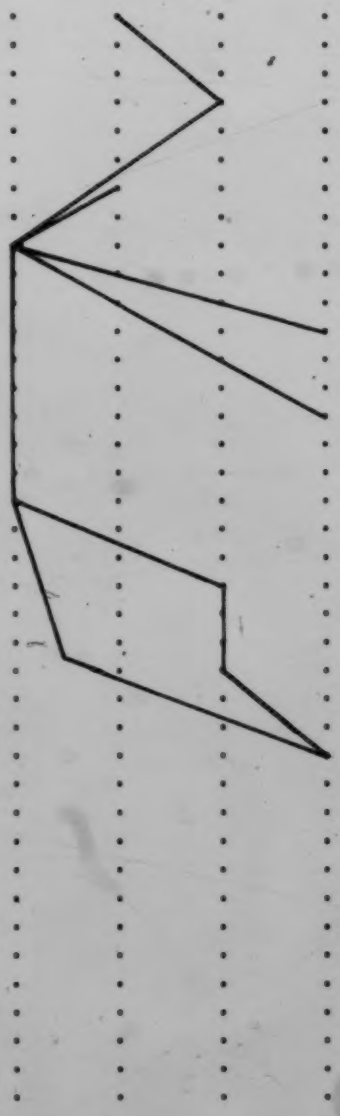

Decision
Acquisition
Process
Disposition
Step in task
Receives telephone billing inquiry
Writes caller name, requested information
Pulls ledger card
Determines whether or not can explain
Refers to supervisor (if cannot explain)
Directs customer on charge, claim procedures
Determines whether or not error made
Writes memo to correct error (if one made)
Types notation on ledger card/new statement (if error made)
Sends statement to patient

Table 3 Verbs